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[illegible]O WHICH IS [illegible]

[illegible]ODUCT [illegible]

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Errata to the Logarithms.

Notwithstanding the very particular Attention that was paid in correcting the Press in the Logarithmic Tables, the following Numbers have escaped erroneous, and must be read as follows,

To N°	1808	read	257128	To N°	6153	read	789087
	1951	—	291813		6961	—	842454
	2067	—	315340		8039	—	905288
	2584	—	412293		10692	—	029088
	2594	—	413970	Co. sec.	6° 47′	—	[illegible]
	3554	—	550717	Tang.	33 30	—	[illegible]
	4452	—	648555	Sec.	33 34	—	080088
	4683	—	670524				

MUSEUM

OF

Decimal Arithmetic.

DECIMAL Fractions, are units divided into 10, 100, 1000, &c. parts. If the integer, a pound, degree, or mile, &c. be divided into 10, 100, &c. parts, the figures after the decimal point expreſs what part of a pound, degree, &c. it is: Thus—12.5 pounds ſignify 12 pounds and 5 tenths of a pound; that is, a pound is ſuppoſed to be divided into ten parts, and the 5 after the decimal point, expreſſes 5 of thoſe parts, or juſt half a pound. 12.25 miles, ſignify 12 miles and 25 hundredths of a mile; that is, the decimal .25 expreſſes a quarter of a mile, or a mile divided into a hundred parts, of which 25 are to be taken, which is juſt a quarter; and 12.75 expreſſes 12 and three quarters, or 75 hundredths of any integer; 12.002 is 12 and 2 thouſandths of any integer, and univerſally; if there be one figure after the decimal point, it expreſſes tenths of the integer; if two, hundreths; if three, thouſandths; if four, ten thouſandths, &c. that is, the integer is ſuppoſed to be divided into ten, an hundred, a thouſand, &c. parts, of which ſo many are to be taken as the figures after the decimal point expreſs; .2 is two tenths; .02 is two hundreths, and .125 is an hundred and twenty-five thouſandths, &c.

N.B. Cyphers after a figure or figures that expreſs a decimal, neither increaſe nor decreaſe the value of it; for .5, .50, .500, all expreſs half any things, the firſt denotes that the integer is divided into 10 parts, of which 5 are to be taken; the ſecond, into 100 parts of which 50 are to be taken; the third, into 1000 parts, of which 500 are to be taken. Cyphers immediately after the decimal point, before the figures of the decimal, decreaſe the value reſpectively expreſs 5 parts of ten, five parts of an hundred, five parts of a thouſand, into which the integer is ſuppoſed to be divided.

ADDITION of DECIMALS.

RULE.

LET the numbers be placed according to their value, as units under units, tens under tens, &c. in whole numbers; and in decimal tenths under tenths, hundred under hundredths, &c. then work as in whole numbers, always remembering to make as many places of decimals in the sum total, as the greatest number thereof were in your example.

Examples.

£	Yards	£
.584	48.94	818.4
.371	21.648	6.97
.281	6.5	3.81
.846	19.8168	.54
.75	72.1108	.61
.6	16.614	1.82
		3.25
£3.432	185.6296	835.40

SUBTRACTION.

Place your numbers as directed in addition, then work as in whole numbers,

Examples.

From	.591	.6198	1.	54.
Take	.397	.1499	0.987	6.9843
	.194	.4699	0.013	47.0157

MULTIPLICATION.

Work in multiplication of decimals as in whole numbers, remembering to set off as many decimals in the product as are decimals both in your multiplicand and multiplier, and

and if you have not a ſufficient number in your product, then prefix as many cyphers as you want.

Examples.

.3416	.4918
.37	37
23912	34426
10248	14754
.126392	18.1966
37.241	.131461
12.23	.2132
111723	262922
74482	394383
74482	131461
37241	262922
455.45743	.028027485 2

DIVISION.

Divide as if all were whole numbers, annexing cyphers to the dividend if need be; and when you have finiſhed the operation, point off for decimals ſo many places as the decimal parts uſed in the dividend exceed thoſe of the diviſor, and thoſe to the left of the decimal point, if any, are whole numbers.

If the places in the quotient are not as many as the above rule requires, then ſupply the defect with cyphers on the left hand of the quotient.

Examples in all the Varieties.

246)160.884(.654 Quotient.
1476
1328
1230
984
984

246)16.0884(.0654
1476
1328
1230
984
984

2.46(1608.84(654
1476
1328
1230
984
984

2.46)160884(6.54
1476
1328
1230
984
984

2.46)160884.00)65400
1476
1328
1230
984
984
00

.0246)160.8840(6540
1476
1328
1230
984
984
0

.0246).160884(6.54
1476

1328
1230

984
984

A vulgar fraction is part of an unit, or integer, expreſſed by two numbers, the one ſtanding above the other with a line between them; the lower number, called the denominator, denotes how many parts the integer is divided into; and the upper number, called the numerator, how many of thoſe parts are to be taken: thus ¼ ſignifies a quarter, that is, it denotes the integer, one pound, mile, &c. divided into four parts, one of which is to be taken, $\frac{3}{16}$ denotes the integer divided into 16 parts, three of which are to be taken.

To reduce a Vulgar Fraction to a Deceimal.

Put a decimal point after the numerator, affix cyphers at pleaſure, and divide it by the denominator.

Examples.

Reduce ¾ to a decimal

4 | 3,00

,75 the decimal equal to ¾

Reduce $\frac{15}{31}$ to a decimal.

31 | 15.0000(.4839 the decimal equal to $\frac{15}{31}$ nearly
124

260
248

120
93

270
279

To reduce a Decimal to its proper Quantity.

Multiply the decimal by the number of the next less or required integer in the greater.

Reduce ,75 of a degree into miles.

Here 60 miles, the required integer, make a degree, the greater integer.

,75
60

45.00 which is 45 miles just.

Reduce ,85 of a degree into leagues.

.85
20

16.00 that is 16 leagues.

Reduce ,44 of a degree into miles.

,44
60

26.40 that is 26 miles and 4 tenths

Oftentimes it will be sufficient to estimate the value of the decimal from the tenths, or the figures immediately following the decimal point; thus, .0 and ,1 may be esteemed of no value; ,2 and ,3 a quarter of the integer; 4 or 5 and 6 half; .7 and ,8 three quarters; and 9 another integer: thus 9.07 miles may be called 9 miles; 8,23 miles, 8 miles and a quarter; 9,521 miles, 9 miles and an half; 7.8 degrees 7 degrees and three quarters, or 7d. 45 min. and 6,95 miles, 7 miles.

Logarithmic

Logarithmic Arithmetic.

NUMBERS, or quantities are ſaid to be in arithmetical progreſſion when they differ by the continual addition of a certain quantity; as,

0. 1. 2. 3. 4. 5. 6. &c. differing by the continual addition of 1. and 3. 6. 9. 12. &c. by the addition of 3.

Geometrical progreſſion is when numbers or quantities differ by the continual multiplication of a certain quantity, as

1. 2. 4. 8. 16. 32. 64. by the continual multiplication of 2. And 1. 10. 100. 1000. 10000. &c. by the multiplication of 10.

Now, take any ſeries of numbars in arithmetical progreſſion beginning with 0; and a correſponding ſeries of geometrical numbers beginning with 1, the former ſeries will be logarithms to the correſponding numbers in the latter, thus

0. 1. 2. 3. 4. 5. 6. 7. &c. logarithms.
1. 2. 4. 8. 16. 32. 64. 128. &c. numbers.

Here 0. 1. 3. &c. are the logarithms of 1. 2. 4. 8, &c. and the following properties are to be noticed. Firſt, if 2 and 3, the logarithms of 4 and 8, be added together, their ſum 5, will correſpond with 32, the product of 4 multiplied by 8. Secondly, if from 7 (the logarithm of 128) be ſubtracted 3 (the logarithm of 8) the remainder 4, will correſpond with 16, the quotient of 128 divided by 8. Thirdly, if 6 (the logarithm of 64) be divided by 2, the quotient 3, correſponding with 8, the ſquare root of 64. Fourthly, if the ſame logarithm be divided by 3, the quotient 2 will correſpond with 4, the cube root of 64. It may be noticed here that the logarithms of the numbers between 4 and 8 are wanting; and that they muſt be greater than 2, but leſs than 3; and that the logarithms of the numbers between 16 and 32 muſt be greater than 4, but leſs than 5; and ſo of the reſt.

Now

Now the moſt convenient ſeries, to which all the modern tables of logarithms are calculated, is the following.

0.	1	2	3	4	5. &c. logarithms.
1	10	100	1000	10000	100000 &c. numbers.

In which all the logarithms of numbers between 1 and 10, are greater than 0 but leſs than 1; and all the logarithms between 10 and 100 greater than 1 but leſs than 2; between 100 and 1000, greater than 2 but leſs than 3; and between 1000 and 10000 greater than 3 but leſs than 4, &c. as may be ſeen in the tables at the latter part of this book, or in Sherwin's mathematical tables, where the nature and conſtruction of logarithms is copiouſly handled.

The logarithms in the above ſeries are called indices, which are often omitted, and the decimal part only put down; for inſtance, if you ſeek the logarithm of 1728, you may find 237544, then 3, the index, as it is called, of the logarithm of 1000, is to be prefixed, and 3,237544 will be the logarithm of 1728. Hence, the mechanical rule to know the index, viz. it muſt always be one leſs than the figures counted in the integral number, and on the contrary the figures in the integral numbers muſt always be one more than the index.

The Logarithm of	17280	is	4,237544
	1728	——	3,237544
	172,8	——	2,237544
	17,28	——	1,237544
	1,728	——	0,237544
	,1728	——	,0,237544
	,01728	——	,9,237544
	,001728	——	,7,237544

The indices of the decimal fractions, which ſometimes perplex novices in logarithmic computations, may be avoided by attending to what is hereafter ſaid in multiplication and diviſion by logarithms.

RULES.

To find the logarithms of numbers, and the numbers belonging to logarithms, in the tables at the latter part of this work.

To find the log. of any whole or integral number leſs than 100.

Look for the number under N in the firſt page of the logarithmic tables, then directly againſt it you have its logarithm with the proper index. The log. of 64 is 1.806180.

To find the log. of any whole number between 100 and 1000.

Look in the firſt column of ſome of the following left-hand pages under Num. and againſt the number under 0 you have the log. with its proper index. The log. of 365 is 2,562293.

To find the logarithm of any whole number between 1000 and 10000.

Seek the three firſt figures under Num. in the left-hand columns, then directly under the fourth figure, at the top of the tables, is the logarithm required, whoſe index muſt be 3, inſtead of 2. Thus, the log. of 5732 is 3,758306, and the log. of 5876 is 3,769082.

To find, nearly, the logarithm of any whole number between 10000 and 108000.

Find the logarithm of the four firſt figures as before taught, to which add the proportional parts at the bottom of the tables, under the fifth figure of the given number at the top of the tables, the ſum will be logarithm required, but the index muſt be 4.

What is the logarithm of 58765?

The log. of 5876 is ——————,769082
The number at bottom under 5 is —— 36

The log. of 58765 is ——————4,769118

To find the logarithm of any number from 10000 to 10860, nearer truth than by the preceding precept.

Seek the four firſt figures in the left-hand columns of the four laſt pages of the logarithms, then, directly under the fifth figure at the top of the tables, is the logarithm required. Thus, the logarithm of 10250 is 4,010978.

To find the logarithm of any mixed number.

Find the logarithm exactly the ſame as if it were a whole number; but remember that the index muſt always be one leſs than the figures counted in the integral part, that is, one leſs than the figures before the decimal point.

The log. of 587,6 is 2,769082
of 58,76 is 1,769082
of 5,876 is 0,769082

To

To find the number anſwering any logarithm to four places of figures.

Seek, in ſome of the left-hand columns under 0, the next leſs logarithm, note the number againſt it, and carry the eye along that line 'till you find the neareſt leſs logarithm, either in the left or right-hand page, and you will have the fourth figure at the top of the table: The index of the logarithm will point out where the decimal point muſt be placed. Thus the number anſwering to the logarithms.

3,845621 is 7008,
2,845621 is 700,8
1,845621 is 70,08
0,845621 is 7,008
9,845621 is ,7008, &c.

The number taken out by this precept will be the neareſt leſs number.

To find the number anſwering any logarithm to five places of figures nearly.

Find the neareſt leſs number as before taught, and take the difference between its logarithm and the given logarithm; the neareſt number to this difference being found among the proportional parts to the mean difference of the two pages, at the bottom of the tables, you will have the fifth figure at the top directly over it.

What is the number anſwering to the logarithm

3,845621?

The next leſs log.——3,845599 it number 7008,

Difference 27

Over 26 (the neareſt parts) is 4, the fifth figure which makes 7008,4 the number required.

To fine the arithmetical complement of any logarithm.

Subtract the index and all the figures from 9, except the laſt ſignificant figure which take from 10; but if the index be more than 0, ſubtract it from 19.

What is the arithmetical complement of

3,845621?

6,154379 Co. ar. or arith comp.

What

What is the arithmetical complement of

9,824570?

0,175430 Co. ar.

Multiplication by Logarithms.

CASE I.

To find the product of two given whole or mixed numbers.

RULE.

Find the logarithm of each given number, and their sum will be the logarithm of the product, whose corresponding number had from the tables, is the answer.

Example I.

Multiply	84	Logarithm	1.924279
by	25		1.397940
Product	2100		3.322219

Example II.

Multiply	41.5	Logarithm	1.618048
by	7.24		0,859739
Product	300.4		2.477787

CASE II.

When both or either of the factors are less than unity.

RULE.

Remove the decimal point towards the right-hand till the first figure becomes a whole number, with which take out the logarithms, and find the product as by Case I. then remove the decimal point as many pieces towards the left-hand as you before removed it to the right, and it is the true product.

Example

Example I.
removed.

Multiply	5.4	—	5.4	Logarithm	0.732394
by —	.25	—	2.5	— —	0.397940
Product	1.35	—	13.5	— —	1.130234

Example II.
removed

Multiply	.74	—	7.4	Logarithm	0.869232
by	5.25	—	5.25	— —	0.720159
Product	3.885	-	38.85	— —	1.589391

Example III.
removed.

Multiply	.742	—	7.42	Logarithm	0,870404
by	.421	—	4.21	— —	0.624282
Product	.312382		31.2382		1.494686

Division by Logarithm.

CASE I.

To divide a whole or mixed number by a leſs whole or mixed number.

RULE.

From the logarithm of the dividend ſubtract the logarithm of the diviſor, and the remainder is the logarithm of the quotient.

Example I.

Divide	—	624	Logarithm		2.795185
by	— —	26	— —		1.414973
Quotient	—	24	— —		1.380212

Example

Example II.

Divide	1221	Logarithm	=3.086716
by	81.4		=1.910624
Quotient	15		=1.176092

Example III.

Divide	34.86	Logarithm	=1.542327
by	8.3		=0.919078
Quotient	4.2		=0.623249

CASE II.

When both or either of the factors are leſs than unity.

RULE.

Remove the decimal points till the factors contain whole numbers, and the dividend the greateſt, with which find the product as before.

Then if the dividend be more places removed than the diviſor, by the exceſs remove the quotient to the left hand. But if the diviſor be more places removed, by the exceſs remove the quotient to the right, and it is done.

Example I.

		removed		
Divide	72.42	72.42	Logarithm	= 1.859859
by	.543	.543		= 0.734800
Quotient	1.81069	1.81069		= 1.125059

Example II.

		removed.		
Divide	8.75	87.5	Logarithm	= 1.942008
by	51.43	51.43		= 1.711217
Quotient	.17013	1.7013		0.230791

Example

Example III.

removed.

Divide	.7824	—	7.824	Logarithm	=0.893429
by —	.4321	—	4.321	— —	=0.635584
Quotient	1.81069	—	1.8107	— —	=0.257845

PROBLEM V.

To ſquare, cube, &c. any given number by logarithms.

RULE.

Multiply the logarithm of the given number, by the index of the power ſought.

Note, 2 is the index of the ſquare, or ſecond power, is 3 the index of the cube, or third power, &c.

Example I.		Example II.	
What is the ſquare of 51 ?		What is the cube of 12 ?	
51 logarithm =	1.707570	12 logarithm=	1.079181
Index — —	2	Index — —	3
Anſwer 2601 =	3.415140	Cube is 1728 =	3 237543

PROBLEM VI.

To extract the roots in logarithms.

RULE.

This is only the reverſe of the former rule, namely, divide the logarithm of the given number by the propoſed index, the number anſwering to the quotient is the required root.

Example I.		Example II.	
What is the ſquare root of 144 ?		What is the cube root of 1728 ?	
144 logarithm = $\frac{2}{}$	2.158362	1729 logarithm = $\frac{3}{}$	3.237544
Anſwer 12 =	1.079181	Anſwer 12 =	1.079181

To extract the ſquare or cube root of a decimal fraction.

Prefix 1 to the decimal index for the ſquare root, and 2 for the cube root, then divide by 2 and 3 reſpectively, as before.

What

What is the ſquare root of ,144?	What is the cube root of ,0001728?
,144 logarithm = ½ | 19,158362	,0001728 log. = ⅓ | 26,237544
Root ,3795 = ,9,579181	Root ,0577 = 8,745848

To work the rule of three by logarithms.

Add the logarithms of the ſecond and third terms together, from which ſum ſubtract the logarithm of the firſt term, the remainder will be the logarithm of the fourth term ſought. This rule is fully exemplified in trigonometry.

Of the Sines, Tangents, and Secants.

To find the logarithmic ſine, tangent, or ſecant of any degree and minute.

If the degrees be leſs than 45, ſeek them at the top of the tables, then againſt the minutes in the left-hand columns, under the words ſine, tangent, ſecant, reſpectively, you will have the logarithm.

If the degrees be more than 45, ſeek them at the bottom of the tables, then againſt the minutes in the right-hand columns, above the words ſine, tangent, ſecant, you will have the logarithm.

If the degrees be more than 90, and leſs than 135, ſeek them at the top of the tables, then againſt the minutes in the left-hand column, under the degrees ſought, you will have the logarithmic ſine to tangent reſpectively to the words at the bottom of the tables.

If the degrees be more than 135, ſeek them at the bottom of the tables, then againſt the minutes in the right-hand columns above the degrees ſought, you will have the logarithmic ſine or tangent according to the words at the top of the tables.

N. B. There are two pages to every degree, the firſt contains the firſt 30 minutes, the other the laſt 30 minutes of each degree.

The logarithmic ſine	of 37° 20′	is	9,782796
	of 52 : 40.	is	9,900433
The log. tangent	of 37 : 10	is	9,879741
	of 52 : 50	is	10,120259.
The log. ſecant	of 37 : 40	is	10,101506
	of 52 : 20	is	10,213911

Here

Here it may be obſerved, that the logarithm of the complement of any angle (that is what it wants of 90 degrees) may be taken out, if neceſſary, at the ſame opening of the book; for the ſine of 52° 40′ is the complement or co-ſine of 37° 20′; and 37° 20′ is the co-ſine of 52° 40′, the ſame of the tangent, contangent, ſecant, and co-ſecant.

The log. ſine of	127 : 15	is	9.900914
	142 : 45	—	9.781966
The log. tang. of	127 : 45	—	10.111100
	142 : 15	—	9.888900

Here alſo it may be obſerved, that the logarithm of the ſupplement of any angle (that is what the angle wants of 180 degrees) may be taken out without ſubtracting the given degrees from 180 degrees, for 127° 15′ is the ſupplement of 52° 45′, and 142° 45′ is the ſupplement of 37° 15′, and the ſupplement of 142° 45′ is 37° 15′, &c. but theſe things will be better underſtood when the reader has proceeded to trigonometry.

To find the degrees and neareſt minute anſwering to any logarithmic ſine, tangent, or ſecant.

Seek the neareſt logarithm either under or above its reſpective word, obſerving if it increaſes downwards, that it corresponds with the leſs number of degrees at the top of the table, and the minutes in the left-hand columns, or with the greater number at the bottom of the tables, and the minutes in the right-hand columns; but if the logarithm increaſes upwards, that it correſponds with the leſs number of degrees at the bottom of the table, and the minutes in the right-hand columns, or with the greater number of degrees at the top of the tables, and the minutes in the left-hand columns. The data, or conſtruction of the problem will immediately determine whether the greater or leſs number of degrees is to be taken.

The degrees and neareſt minute corresponding with the logarithmic ſine 9,724632 will be found thus:

The neareſt logarithm under ſine, is 9,724614 increaſing downwards, therefore corresponds with 32° 2′ if the angle be acute, but with 147° 58′ if the angle be obtuſe.

The degrees and neareſt minute corresponding with the logarithmic tangent 10,199541 is found thus:

The

The neareſt logarithm above tangent is 10,19943 increaſing upwards, therefore correſponds with 57° 43′, or with 122° 17′ reſpectively, as the angle is acute or obtuſe.

If more examples be neceſſary, the reader may refer to plane trigonometry, and particularly read *article* 34, and the latter part of *article* 39.

The degrees and minutes correſponding with the ſecant of an angle are found in the ſame manner, but the ſecant of an obtuſe angle is never uſed.

The logarithmic co-ſecant ſtriking out the 1 in the index, is the arithmetical complement of the ſine, and in theſe tables it is placed next to it, ſo that the arithmetical complement of the ſine of any angle is immediately taken out, without ſubtracting each figure from 9, as before taught.

As ſometimes in printing a type may not take place, and a figure be dubious, it may not be a miſs, here, to obſerve that the firſt and ſecond columns, the third and fourth, and fifth and ſixth are the arithmetical complements of each other; therefore the firſt, ſecond, third, &c. figure after the index, being added to the firſt, ſecond, third, &c. figures of the other column, will always make 9, except the laſt figures (not ſo material) which ſhould make 10, but will always make 9 or 10.

To find the logarithmic ſine or tangent of any angle leſs than 3 degrees true to a ſecond.

Take the logarithmic ſine or tangent to the neareſt degree and minute: ſubtract therefrom the common logarithm of the number of ſeconds in the degrees and minutes taken; then to the difference add the logarithm of the number of ſeconds in the angle given.

Required the ſine of 2° 38′ 54″.

Sine of 2° 39″ — — — —	8,664968
Logarithm of 9540″=2° 89′ —	3,979448
Difference — — —	4,685520
Logarithm of 9534″=2° 38′ 54″	3,979275
The ſine of 2° 38′ 54″ — —	8,664695

In these tables the difference is given at the bottom of the tables to every 5 minutes both to the sines and tangents up to 3 degrees, that for the sine in the left-hand page, and that for the tangent in the right-hand page; the index, and the three first figures standing under the column of minutes, and the latter three figures under their respective minute.

Required the tangent of 2° 20′ 35″.

At the bottom of the tables belonging to 2 degrees, under 20′ is 815, which affixed to 4,685 under the column of minutes, makes	—	4,685815
The log. of 8435″ = 2° 20′ 35″	—	3,926085
The log. tangent of — 2 20 35 —	—	8,611900

The logarithmic sine or tangent, less than three degrees, being given to find the degrees, minutes and seconds, corresponding.

Find the degrees and nearest minutes as before taught, then from the given logarithmic sine or tangent, subtract the difference corresponding with the nearest minutes found at the bottom of the tables for the sine or tangent respectively, the remainder will be the common logarithm of the number of seconds in the angle.

What degrees, minutes and seconds, correspond with the logarithmic sine of 8.664695?

The nearest logarithmic sine is 8,664968, which corresponds with 2° 39′. The difference at the bottom of the tables is 4,685418, the index, and the three first figures being taken under the column of minutes, and the latter three figures under 40′ the nearest to 39°.

Then, from	—	—	8,664695
Subtract	—	—	4,685418
The log. of 9534″	—	—	3,979277

Which reduced gives 2° 38′ 54″.

To find the logarithmic sine or tangent of any angle between 3 and 8 degrees, nearly.

Find the logarithm to the nearest degree and minute, then take the number corresponding with the nearest minute at the bottom of the tables, which multiply by the number of seconds more, or less than the nearest minute, the product added to, or subtracted from the logarithm of the nearest minute respectively, (as the logarithm was taken more or less than just) will give the required logarithm, nearly.

Required

Required the logarithmic fine of 6° 32′ 20″

The log. fine of 6° 32′ is —	9.056071
The number to 32′ is 18, which multiplied by 20″ gives —	360
The fine of 6° 32′ 20″ —	9,056431

Required the logarithmic tangent of 6° 32′ 50″.

The log. tangent of 6° 33′ is —	9.060016
The number to 33′ is 18, which multiplied by 10 gives —	180
The tangent of 6° 32′ 50″, nearly	9.059836

To find the degrees, minutes and ſeconds, correſponding with any logarithmic fine or tangent, between 3 and 8 degrees.

Find the logarithm of the neareſt leſs degree and minute, and ſubtract it from the given logarithm, the difference, divided by the number at the bottom of the tables correſponding with the neareſt minute, will quote the number of ſeconds to be affixed to the degree and minute found.

What degrees, minutes and ſeconds, correſpond with the logarithmic fine — — — — 9.012-76

The log. fine of 5° 54′ is — —	9,011962
The difference — — — —	814

Which divided by 20, the number correſponding with 55′ (the neareſt 54′) at the bottom of the tables, quotes 40″ to be affixed to 5° 54′, that is, 5° 54′ 40″.

To find the logarithmic fine or tangent of any angle between 8 and 82 degrees.

Find the logarithm of the degree and minute, to which add the number correſponding with the ſeconds, if they be leſs than 30; but if more than 30, find the logarithm of the next greater minute, from which ſubtract the number correſponding with the ſeconds wanting to that minute.

What is the logarithmic fine of 30° 42′ 10″?

The log. fine of 30° 42′ is —	9.708094
The number to 10″ is —	36
The log. fine of 30° : 42′ : 10″	9.708094

What

What is the logarithmic tangent of 59° 18′ 40″?

The log. tan. of 59° 19′ is	——	10.226679
The number to 20″	—— ——	96
The log. tan. of 59° 18′ 40″		10.226583

A logarithmic fine or tangent, between 8 and 82 degrees, being given to find the degrees, minutes and ſeconds, correſponding.

Find the logarithm of the degree, and next leſs minute, which ſubtract from the given logarithm the difference found at the bottom of the tables, correſponds with the number of ſeconds to be affixed.

What are the degrees, minutes and ſeconds, correſponding with the logarithmic fine of —— —— 9.880c54;

The log. fine of 49° 20′ is	——	9.879963
Difference —— —— —— ——		91

The neareſt difference at the bottom of the tables is 90 under 50″, which affixed to 49° 20′, gives 49° 20′ 50″, the angle required.

The logarithms, and quantities of obtuſe angles, may be found by the preceding methods, if the ſupplements be taken; for the log. fine of 127° 13′ 10″, is the ſame as the log. fine of 52° 46′ 50.″

The differences of the logarithmic fines above 82° are ſo ſmall, that the proportional parts may be eſtimated nearly, or found by proportion, if neceſſary; but the fines of angles between 85 and 95 degrees ſhould be avoided, if cloſe calculations, or logarithms of 8 or 10 places be uſed; otherwiſe the differences are not ſufficient to determine an angle to ſeconds accurately.

It will be eaſily perceived, that the numbers at the bottom of each page between 8 and 82 degrees, are nothing more than a mean integral quantity for each degree, multiplied by the number of correſponding ſeconds; and thoſe numbers between 3 and 8 degrees a mean integral quantity for one ſecond to every five minutes, which is to be multiplied by the number of ſeconds; this would have been done had there been convenient room at the bottom of the pages to have printed the reſults. Theſe numbers will determine an angle under 12 degrees to 3 ſeconds, above 12 degrees to leſs, and in general to a ſecond; and the

logarithms

logarithms of all angles will be found as true as is neceſſary for any data that can be actually acquired at ſea or land by obſervation, except with the large fixed inſtruments in the obſervatories.

The logarithmic difference to the 3 firſt degrees determines an angle to a ſecond and leſs, and the logarithm to a great degree of accuracy.

To find the natural ſine tangent or ſecant of any angle.

Find the logarithmic ſine by the preceding rules (by the latter, if it be wanted to ſeconds, but by the former if to minutes only) which ſeek for amongſt the common logarithms, the natural number anſwering to it is the natural ſine, which may be eſteemed a decimal fraction; and cyphers placed before it accordingly, if the index of the logarithmic ſine, &c. be leſs than 9; but if the index be 10, 11, 12, or 13, then the 1ſt, 2d, 3d and 4th figures reſpectively may be eſteemed whole numbers, the following decimals, and added, ſubtracted, and worked as ſuch, according as the application of them may require.

The N. ſine of	23°	29′	is	,39608
pf	0	20	is	,00873
The N. tang of	87	15	is	,2081900

To find the logarithmic verſed ſine of any angle.

Take half the given angle, and find the log. ſine of it, which ſine multiply by 2, and ſubtract the ſine of 60 degrees, viz. 9,698970 from the product, the remainder is the log. verſed ſine of the given angle.

What is the log. verſed ſine of 78° 48′?		
Half, 39° 24′ its log. ſine	—	9,802589
Multiplied by	— — —	2
Product	— —	19,605178
Subtract	— —	9,698970
Log. v. ſ. 78° 48′	— —	9,906208

To find the natural verſed ſine of any angle.

Find the logarithmic verſed ſine, which ſeek in the common logarithms; the natural number anſwering to it, will be the natural verſed ſine, under the ſame predicaments of natural ſine.

The

The natural v. ſ. of 78° 48′ is ,80577.

If the reader wiſh to ſee more concerning theſe uſeful numbers and their conſtruction, he may conſult Sherwin's mathematical tables, and if has patience, perſeverance, and a ſufficient ſtock of mathematical knowledge, he may be fully ſatisfied; if not, he will have the pleaſure to find the ſubject copiouſly handled, and the natural ſines, tangents, ſecants, and verſed ſines to every minute of the quadrant.

FINIS.

TABLE OF LOGARITHMS

For Numbers regularly increasing from an Unit to 10,860, with proportional Parts, by which the Logarithm of any Number less than 108,600 may be nearly, and very easily found.

N.	Logar.	N.	Logar.	N	Logar.
1	0.000000	34	1.531479	67	1.826075
2	0.301030	35	1.544068	68	1.832509
3	0.477121	36	1.556302	69	1.838849
4	0.602060	37	1.568202	70	1.845098
5	0 698970	38	1.579784	71	1.851258
6	0.778151	39	1.591065	72	1.857332
7	0.845098	40	1.602060	73	1.863323
8	0.903090	41	1.612784	74	1.869232
9	0.954242	42	1.623249	75	1.875061
10	1,000000	43	1.633468	76	1.880814
11	1.041393	44	1.643453	77	1.886491
12	1.079181	45	1.653212	78	1.892095
13	1.113943	46	1.662758	79	1.897627
14	1.146128	47	1.672098	80	1.903090
15	1.176091	48	1.681241	81	1.908485
16	1.204120	49	1.690196	82	1.913814
17	1.230449	50	1.698970	83	1.919078
18	1.255272	51	1.707570	84	1.924279
19	1.278754	52	1.716003	85	1.929419
20	1.301030	53	1.724276	86	1.934498
21	1.322219	54	1.732394	87	1.939519
22	1.342423	55	1.740363	88	1.944483
23	1.361728	56	1.748188	89	1.949390
24	1.380211	57	1.755875	90	1.954242
25	1.397940	58	1.763428	91	1.959041
26	1.414973	59	1.770852	92	1 963788
27	1.431364	60	1.778151	93	1.968483
28	1.447158	61	1.785330	94	1.973128
29	1.462398	62	1.792392	95	1.977724
30	1.477121	63	1.799340	96	1.982271
31	1.491362	64	1.806180	97	1.986772
32	1.505 50	65	1.812913	98	1.991226
33	1.518514	66	1.819544	99	1.995635

A TABLE of LOGARITHMS,

No	0	1	2	3	4	Dif.
100	2.000000	2.000434	2.000868	2.001301	2.001734	432
101	2.004321	2.004751	2.005180	2.005609	2.006038	428
102	2.008600	2.009026	2.009451	2.009876	2.010300	424
103	2.012837	2.013259	2.013680	2.014100	2.014520	419
104	2.017033	2.017451	2.017868	2.018284	2.018700	416
105	2.021189	2.021603	2.022016	2.022428	2.022841	412
106	2.025306	2.025715	2.026124	2.026533	2.026942	408
107	2.029384	2.029789	2.030195	2.030600	2.031004	404
108	2.033424	2.033826	2.034227	2.034628	2.035029	400
109	2.037426	2.037825	2.038223	2.038620	2.039017	396
110	2.041393	2.041787	2.042182	2.042575	2.042969	393
111	2.045323	2.045714	2.046105	2.046495	2.046885	389
112	2.049218	2.049606	2.049993	2.050380	2.050766	386
113	2.053078	2.053463	2.053846	2.054230	2.054613	382
114	2.056905	2.057286	2.057666	2.058046	2.058426	379
115	2.060698	2.061075	2.061452	2.061829	2.062206	376
116	2.064458	2.064832	2.065206	2.065580	2.065953	372
117	2.068186	2.068557	2.068928	2.069298	2.069668	369
118	2.071882	2.072250	2.072617	2.072985	2.073352	366
119	2.075547	2.075912	2.076276	2.076640	2.077004	363
120	2.079181	2.079543	2.079904	2.080266	2.080626	360
121	2.082785	2.083144	2.083503	2.083861	2.084219	357
122	2.086360	2.086716	2.087071	2.087426	2.087781	355
123	2.089905	2.090258	2.090611	2.090963	2.091315	351
124	2.093422	2.093772	2.094122	2.094471	2.094820	349
125	2.096910	2.097257	2.097604	2.097951	2.098297	346
126	2.100370	2.100715	2.101059	2.101403	2.101747	343
127	2.103804	2.104145	2.104487	2.104828	2.105169	340
128	2.107210	2.107549	2.107888	2.108227	2.108565	338
129	2.110590	2.110926	2.111262	2.111598	2.111934	335
130	2.113943	2.114277	2.114611	2.114944	2.115278	333
131	2.117271	2.117603	2.117934	2.118265	2.118595	330
132	2.120574	2.120903	2.121231	2.121560	2.121888	328
133	2.123852	2.124178	2.124504	2.124830	2.125156	325
134	2.127105	2.127429	2.127752	2.128076	2.128399	323
135	2.130334	2.130655	2.130977	2.131298	2.131619	320
136	2.133539	2.133858	2.134177	2.134496	2.134814	318
137	2.136721	2.137037	2.137354	2.137670	2.137987	315
138	2.139879	2.140194	2.140508	2.140822	2.141136	314
139	2.143015	2.143327	2.143639	2.143951	2.144263	311
140	2.146128	2.146438	2.146748	2.147058	2.147367	309
141	2.149219	2.149527	2.149835	2.150142	2.150449	307
142	2.152288	2.152594	2.152900	2.153205	2.153510	305
Dif.	345	34	69	103	138	

from 1 to 10860.

N°	5	6	7	8	9	Dif.
100	2.002166	2.002598	2.003029	2.003460	2.003891	432
101	2.006466	2.006894	2.007321	2.007748	2.008174	428
102	2.010724	2.011147	2.011570	2.011993	2.012415	424
103	2.014940	2.015360	2.015779	2 016197	2.016615	419
104	2.019116	2.019532	2.019947	2.020361	2.020775	416
105	2 023252	2.023664	2.024075	2.024486	2.024896	412
106	2.027350	2.027757	2.028165	2.028571	2.028978	408
107	2.031408	2.031812	2.032216	2.032619	2.033021	404
108	2.035430	2.035830	2.036229	2.036629	2.037028	400
109	2.039414	2.039811	2.040207	2.040602	2.040998	396
110	2.043362	2.043755	2.044148	2.044540	2.044931	393
111	2.047275	2.047664	2.048053	2.048442	2.048830	389
112	2.051152	2.051538	2.051924	2.052309	2.052694	386
113	2.054996	2.055378	2.055760	2.056142	2.056524	382
114	2.058805	2.059185	2 059563	2 059942	2.060320	378
115	2.062582	2.062958	2.063333	2.063709	2.064083	376
116	2.066326	2.066699	2.067071	2.067443	2.067814	372
117	2.070038	2.070407	2.070776	2.071145	2.071514	369
118	2.073718	2.074085	2 074451	2.074816	2.075182	366
119	2.077368	2.077731	2.078094	2.078457	2.078819	363
120	2.080987	2.081347	2.081707	2.082067	2.082426	360
121	2.084576	2.084934	2.085291	2.085647	2.086004	357
122	2.088136	2.088490	2.088845	2.089198	2.089552	355
123	2.091667	2,092018	2.092370	2.092721	2.093071	351
124	2.095169	2.095518	2.095866	2.096215	2.096562	349
125	2.098644	2.098990	2 099335	2.099681	2.100026	346
126	2.102090	2.102434	2.102777	2.103119	2.103462	343
127	2.105510	2.105851	2 106191	2.106531	2.106870	340
128	2.108903	2.109241	2.109578	2.109916	2.110253	338
129	2.112270	2.112605	2 112940	2.113275	2.113609	335
130	2.115611	2.115943	2.116276	2.116608	2.116940	333
131	2.118926	2.119256	2.119586	2.119915	2.120245	330
132	2.122216	2.122543	2.122871	2.123198	2.123525	328
133	2.125481	2.125806	2.126131	2.126456	2.126781	325
134	2.128722	2.129045	2.129368	2.129690	2.130012	323
135	2.131939	2.132260	2.132580	2.132900	2.133219	320
136	2.135133	2.135451	2,135768	2.136086	2.136403	318
137	2.138303	2.138618	2.138934	2.139249	2.139564	315
138	2.141450	2.141763	2.142076	2.142389	2.142702	314
139	2.144574	2.144885	2.145196	2.145507	2.145818	311
140	2.147676	2.147985	2,148294	2,148603	2.148911	309
141	2.150756	2.151063	2.151370	2.151676	2.151982	307
142	2.153815	2.154119	2.154424	2.154728	2.155032	305
❁	172	207	241	276	310	❁

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
143	2.155316	2.155640	2.155943	2.156246	2.156549	303
144	2.158362	2.158664	2.158965	2.159266	2.159567	301
145	2.161368	2.161667	2.161967	2.162266	2.162564	299
146	2.164353	2.164650	2.164947	2.165244	2.165541	297
147	2.167317	2.167613	2.167908	2.168203	2.168497	295
148	2.170262	2.170555	2.170848	2.171141	2.171434	293
149	2.173186	2.173478	2.173769	2.174060	2.174351	291
150	2.176091	2.176381	2.176670	2.176959	2.177248	289
151	2.178977	2.179264	2.179552	2.179839	2.180126	287
152	2.181844	2.182129	2.182415	2.182700	2.182985	285
153	2.184691	2.184975	2.185259	2.185542	2.185825	283
154	2.187521	2.187803	2.188084	2.188366	2.188647	281
155	2.190332	2.190612	2.190892	2.191171	2.191451	279
156	2.193125	2.193403	2.193681	2.193959	2.194237	278
157	2.195900	2.196176	2.196453	2.196729	2.197005	276
158	2.198657	2.198932	2.199206	2.199481	2.199755	274
159	2.201397	2.201670	2.201943	2.202216	2.202488	272
160	2.204120	2.204391	2.204663	2.204933	2.205204	271
161	2.206826	2.207096	2.207365	2.207634	2.207904	269
162	2.209515	2.209783	2.210051	2.210319	2.210586	267
163	2.212188	2.212454	2.212720	2.212986	2.213252	266
164	2.214844	2.215109	2.215373	2.215638	2.215902	264
165	2.217484	2.217747	2.218010	2.218273	2.218536	262
166	2.220108	2.220370	2.220631	2.220892	2.221153	261
167	2.222716	2.222976	2.223236	2.223496	2.223755	259
168	2.225309	2.225568	2.225826	2.226084	2.226342	258
169	2.227887	2.228144	2.228400	2.228657	2.228913	256
170	2.230449	2.230704	2.230960	2.231215	2.231470	254
171	2.232996	2.233250	2.233504	2.233757	2.234011	253
172	2.235528	2.235781	2.236033	2.236285	2.236537	252
173	2.238046	2.238297	2.238548	2.238799	2.239049	250
174	2.240549	2.240799	2.241048	2.241297	2.241546	249
175	2.243038	2.243286	2.243534	2.243782	2.244030	248
176	2.245513	2.245759	2.246006	2.246252	2.246499	246
177	2.247973	2.248219	2.248464	2.248709	2.248954	245
178	2.250420	2.250664	2.250908	2.251151	2.251395	243
179	2.252853	2.253096	2.253338	2.253580	2.253822	242
180	2.255272	2.255514	2.255755	2.255996	2.256237	241
181	2.257679	2.257918	2.258158	2.258398	2.258637	239
182	2.260071	2.260310	2.260548	2.260787	2.261025	238
183	2.262451	2.262688	2.262925	2.263162	2.263399	237
184	2.264818	2.265054	2.265290	2.265525	2.265761	235
185	2.267172	2.267406	2.267641	2.267875	2.268110	234
Dif.	264	26	53	79	106	❁

N°	5	6	7	8	9	Dif.
143	2.156852	2.157154	2.157457	2.157759	2.158061	303
144	2.159868	2.160168	2.160468	2.160769	2.161068	301
145	2.162863	2.163161	2.163460	2.163757	2.164055	299
146	2.165838	2.166134	2 166430	2.166726	2.167022	297
147	2.168792	2.169086	2.169380	2.169674	2.169968	295
148	2.171726	2.172019	2.172311	2.172603	2.172895	292
149	2.174641	2.174932	2.175222	2.175512	2.175802	291
150	2.177536	2.177825	2.178113	2.178401	2.178689	289
151	2.180413	2.180699	2.180986	2.181272	2.181558	287
152	2.183270	2.183555	2.183839	2.184123	2.184407	285
153	2.186108	2.186391	2.186674	2.186956	2.187239	283
154	2.188928	2.189209	2.189490	2.189771	2.190051	281
155	2.191730	2.192010	2.192289	2.192567	2.192846	279
156	2.194514	2.194792	2.195069	2.195346	2.195623	278
157	2.197281	2.197556	2.197832	2.198107	2.198382	276
158	2.200029	2.200303	2.200577	2.200850	2.201124	274
159	2.202761	2.203033	2.203305	2.203577	2.203848	272
160	2.205475	2.205746	2.206016	2.206286	2.306556	271
161	2.208173	2.208441	2.208710	2.208979	2.209247	269
162	2.210853	2.211121	2.211388	2.211654	2.211921	267
163	2.213518	2.213783	2.214049	2.214314	2.214579	266
164	2.216166	2.216430	2.216694	2.216957	2.217221	264
165	2.218798	2.219060	2.219323	2.219585	2.219846	262
166	2.221414	2.221675	2.221936	2.222196	2.222456	261
167	2.224015	2.224274	2.224533	2.224792	2.225051	259
168	2.226600	2.226858	2.227115	2.227372	2.227630	258
169	2.229170	2.229426	2.229682	2.229938	2.230193	256
170	2.231724	2.231979	2.232234	2.232488	2.232742	204
171	2.234264	2.234517	2.234770	2.235023	2.235276	253
172	2.236789	2.237041	2.237292	2.237544	2.237795	251
173	2.239299	2.239550	2.239800	2.240050	2.240300	250
174	2.241795	2.242044	2.242293	2.242541	2.242790	249
175	2.244277	2.244524	2.244772	2.245019	2.245266	248
176	2.246745	2.246991	2.247237	2.247482	2.247728	246
177	2.249198	2.249443	2.249687	2.249932	2.250176	245
178	2.251638	2.251881	2.252125	2.252367	2.252610	243
179	2.254064	2.254306	2.254548	2.254790	2.255031	242
180	2.256477	2.256718	2.256958	2 257198	2.257439	241
181	2.258877	2.259116	2.259355	2.259594	2.259833	239
182	2.261263	2.261501	2.261739	2.261976	2.262214	238
183	2.263636	2.263873	2.264109	2.264346	2.264582	237
184	2.265996	2.266232	2.266467	2.266702	2.266937	235
185	2.268344	2.268578	2.268812	2.269046	2.269279	234
❁	132	158	185	211	238	Pts.

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif
186	2.269513	2.269746	2.269980	2.270213	2,270446	233
187	2.271842	2.272074	2.272306	2.272538	2,272770	232
188	2.274158	2.274389	2.274620	2.274850	2,275081	230
189	2.276462	2.276692	2.276921	2.277151	2,277380	229
190	2.278754	2.278981	2.279211	2.279439	2,279667	228
191	2.281033	2.281261	2.281488	2.281715	2,281942	227
192	2.283301	2.283527	2.283753	2.283979	2,284205	226
193	2.285557	2.285782	2.286007	2.286232	2,286456	225
194	2.287802	2.288026	2.288249	2.288473	2,288696	223
95	2.290035	2.290257	2.290480	2.290702	2,290925	222
196	2.292256	2.292478	2.292699	2.292920	2,293141	221
197	2.294466	2.294687	2.294907	2.295127	2,295347	220
198	2.296665	2.296884	2.297104	2.297323	2,297542	219
199	2.298853	2.299071	2.299289	2.299507	2,299725	218
200	2.301030	2.301247	2.301464	2.301681	2,301898	217
201	2.303196	2.303412	2.303628	2.303844	2,304059	216
202	2.305351	2.305566	2.305781	2.305996	2,306211	215
203	2.307496	2.307710	2.307924	2.308137	2,308351	213
204	2.309630	2.309843	2.310056	2.310268	2,310481	212
205	2.311754	2.311966	2.312177	2.312389	2,312600	211
206	2.313867	2.314078	2.314289	2.314499	2,314710	210
207	2.315970	2.316180	2.316390	2.316599	2,316809	209
208	2.318063	2.318272	2.318481	2.318689	2,318898	208
209	2.320146	2.320354	2.320562	2.320769	2,320977	207
210	2.322219	2.322426	2.322633	2.322839	2,323046	206
211	2.324282	2.324488	2.324694	2.324899	2,325105	205
212	2.326336	2.326541	2.326745	2.326950	2,327155	204
213	2.328380	2.328583	2.328787	2.328991	2,329194	203
214	2.330414	2.330617	2.330819	2.331022	2,331225	202
215	2.332438	2.332640	2.332842	2.333044	2,333246	202
216	2.334454	2.334655	2.334856	2.335056	2,335257	201
217	2.336460	2.336660	2.336860	2.337060	2,337260	200
218	2.338456	2.338656	2.338855	2.339054	2,339253	199
219	2.340444	2.340642	2.340841	2.341039	2,341237	198
220	2.342423	2.342620	2.342817	2.343014	2,343212	197
221	2.344392	2.344589	2.344785	2.344981	2,345178	196
222	2.346353	2.346549	2.346744	2.346939	2,347135	195
223	2.348305	2.348500	2.348694	2.348889	2,349083	194
224	2.350248	2.350442	2.350636	2.350829	2,351023	193
225	2.352183	2.352375	2.352568	2.352761	2,352954	193
226	2.354108	2.354301	2.354493	2.354685	2,354876	192
227	2.356026	2.356217	2.356408	2.356599	2,356790	191
228	2.357935	2.358125	2.358316	2.358506	2,358696	190
Dif.	209	21	42	63	84	❁

N°	5	6	7	8	9	Dif
186	2,270679	2,270912	2,271144	2,271377	2,271609	233
187	2,273001	2,273233	2,273464	2,273696	2,273927	232
188	2,275311	2,275542	2,275772	2.276002	2,276232	230
189	2,277609	2,277838	2,278067	2,278296	2,278525	229
190	2,279895	2,280123	2,280351	2,280578	2,280806	228
191	2,282169	2,282396	2,282622	2,282849	2,283075	227
192	2,284431	2,284656	2,284882	2,285107	2,285332	226
193	2,286681	2,286905	2,287130	2,287354	2,287578	225
194	2,288920	2,289143	2,289366	2,289589	2,289812	223
195	2,291147	2,291369	2,291591	2,291813	2,292034	222
196	2,293363	2,293584	2,293804	2,294025	2,294246	221
197	2,295567	2,295787	2,296007	2,296226	2,296446	220
198	2,297761	2,297979	2,298198	2,298416	2,298635	219
199	2,299943	2,300161	2,300378	2,300595	2,300813	218
200	2,302114	2,302331	2,302547	2,302764	2,302980	217
201	2,304275	2,304491	2,304706	2,304921	2,305136	216
202	2,306425	2,306639	2,306854	2,307068	2,307282	215
203	2,308564	2,308778	2,308991	2,309204	2,309417	213
204	2,310693	2,310906	2,311118	2,311330	2,311542	212
205	2,312812	2,313023	2,313234	2,313445	2,313656	211
206	2,314920	2,315130	2,315340	2,315551	2,315760	210
207	2,317018	2,317227	2,317436	2.317646	2,317854	209
208	2,319106	2,319314	2,319522	2,319730	2,319938	208
209	2,321184	2,321391	2,321598	2,321805	2,322012	207
210	2,323252	2,323458	2,323665	2,323871	2,324077	206
211	2,325310	2,325516	2,325721	2,325926	2,326131	205
212	2,327359	2,327563	2,327767	2,327972	2,328176	204
213	2,329398	2,329601	2,329805	2,330008	2,330211	203
214	2,331427	2,331630	2,331832	2,332034	2,332236	202
215	2,333447	2,333649	2,333850	2,334051	2.334253	202
216	2,335458	2,335658	2,335859	2,336059	2,336260	201
217	2,337459	2,337659	2,337858	2,338058	2,338257	200
218	2,339451	2,339650	2,339849	2,340047	2,340246	199
219	2,341435	2,341632	2,341830	2,342028	2,342225	198
220	2,343409	2,343606	2,343802	2,343999	2,344196	197
221	2,345374	2,345570	2,345766	2,345962	2,346157	196
222	2,347330	2,347525	2,347720	2,347915	2,348110	195
223	2,349278	2,349472	2,349666	2,349860	2,350054	194
224	2,351216	2,351410	2,351603	2,351796	2,351989	193
225	2,353147	2,353339	2,353532	2,353724	2,353916	193
226	2,355068	2,355260	2,355452	2,355643	2,355834	192
227	2,356981	2,357172	2,357363	2,357554	2,357744	191
228	2,358886	2,359076	2,359266	2,359456	2,359646	
✱	105	126	147	168	189	

A TABLE of LOGARITHMS,

No	0	1	2	3	4	Dif.
229	2,359835	2,360025	2,360215	2,360404	2,360593	189
230	2,361728	2,361917	2,362105	2,362294	2,362482	188
231	2,363612	2,363800	2,363988	2,364176	2,364363	188
232	2,365488	2,365675	2,365862	2,366049	2,366236	187
233	2,367356	2,367542	2,367729	2,367915	2,368101	186
234	2,369216	2,369401	2,369587	2,369772	2,369958	185
235	2,371068	2,371253	2,371437	2,371622	2,371806	184
236	2,372912	2,373096	2,373280	2,373464	2,373647	184
237	2,374748	2,374932	2,375115	2,375298	2,375481	183
238	2,376577	2,376759	2,376942	2,377124	2,377306	182
239	2,378398	2,378580	2,378761	2,378943	2,379124	181
240	2,380211	2,380392	2,380573	2,380754	2,380934	181
241	2,382017	2,382197	2,382377	2,382557	2,382737	180
242	2,383815	2,383995	2,384174	2,384353	2,384533	179
243	2,385606	2,385785	2,385964	2,386142	2,386321	178
244	2,387390	2,387568	2,387746	2,387923	2,388101	178
245	2,389166	2,389343	2,389520	2,389698	2,389875	177
246	2,390935	2,391112	2,391288	2,391464	2,391641	176
247	2,392697	2,392873	2,393048	2,393224	2,393400	176
248	2,394452	2,394627	2,394802	2,394977	2,395152	175
249	2,396199	2,396374	2,396548	2,396722	2,396896	174
250	2,397940	2,398114	2,398287	2,398461	2,398634	173
251	2,399674	2,399847	2,400020	2,400192	2,400365	173
252	2,401401	2,401573	2,401745	2,401917	2,402089	172
253	2,403121	2,403292	2,403464	2,403635	2,403807	171
254	2,404834	2,405005	2,405176	2,405346	2,405517	171
255	2,406540	2,406710	2,406881	2,407051	2,407221	170
256	2,408240	2,408410	2,408579	2,408749	2,408918	169
257	2,409933	2,410102	2,410271	2,410440	2,410609	169
258	2,411620	2,411788	2,411956	2,412124	2,412293	168
259	2,413300	2,413467	2,413635	2,413803	2,413970	167
260	2,414973	2,415140	2,415307	2,415474	2,415641	167
261	2,416641	2,416807	2,416973	2,417139	2,417306	166
262	2,418301	2,418467	2,418633	2,418798	2,418964	165
263	2,419956	2,420121	2,420286	2,420450	2,420616	165
264	2,421604	2,421768	2,421933	2,422097	2,422261	164
265	2,423246	2,423410	2,423574	2,423737	2,423901	164
266	2,424882	2,425045	2,425208	2,425371	2,425534	163
267	2,426511	2,426674	2,426836	2,426999	2,427161	162
268	2,428135	2,428297	2,428459	2,428621	2,428783	162
269	2,429752	2,429914	2,430075	2,430236	2,430398	161
270	2,431364	2,431525	2,431685	2,431846	2,432007	161
271	2,432969	2,433130	2,433290	2,433450	2,433610	160
@	173	17	35	52	69	

N°	5	6	7	8	9	Dif.
229	2.360783	2.360972	2.361161	2.361350	2.361539	189
230	2.362671	2.362859	2.363048	2.363236	2.363424	188
231	2.364551	2.364739	2.364926	2.365113	2.365301	188
232	2.366423	2.366610	2.366796	2.366983	2.367169	187
233	2 368287	2.368473	2.368659	2.368844	2.369030	186
234	2.370143	2.370328	2.370513	2 370698	2.370883	185
235	2.371991	2.372175	2.372360	2.372544	2.372728	184
236	2.373831	2.374015	2.374198	2.374382	2.374565	184
237	2.375664	2.375846	2.376029	2.376212	2.376394	183
238	2.377488	2.377670	2.377852	2.378034	2.378216	182
239	2.379306	2.379487	2.379668	2.379849	2.380030	181
240	2.381115	2.381296	2.381476	2.381656	2.381837	181
241	2.382917	2.383097	2.383277	2.383456	2.383636	180
242	2.384712	2.384891	2.385070	2.385249	2.385428	179
243	2.386499	2.386677	2.386856	2.387034	2 387212	178
244	2.388279	2.388456	2.388634	2.388811	2.388989	178
245	2.390051	2.390228	2.390405	2.390582	2.390759	177
246	2.391817	2.391993	2.392169	2.392345	2.392521	176
247	2.393575	2.393751	2.393926	2.394101	2.394277	176
248	2.395326	2.395501	2.395676	2.395850	2.396025	175
249	2.397071	2.397245	2.397419	2.397592	2.397766	174
250	2.398808	2.398981	2.399154	2.399328	2.399501	173
251	2.400538	2.400711	2.400883	2.401056	2.401228	173
252	2.402261	2.402433	2.402605	2.402777	2.402949	172
253	2.403978	2.404149	2.404320	2.404492	2.404663	171
254	2.405688	2.405858	2.406029	2.406199	2.406370	171
255	2.407391	2.407561	2.407731	2.407901	2.408070	170
256	2.409087	2.409257	2.409426	2.409595	2.409764	169
257	2.410777	2.410946	2.411114	2.411283	2.411451	169
258	2.412461	2.412629	2.412796	2.412964	2.413132	168
259	2.414137	2.414305	2.414472	2.414639	2.414806	167
260	2.415808	2.415974	2.416141	2.416308	2.416474	167
261	2.417472	2.417638	2.417804	2.417970	2.418135	166
262	2.419129	2.419295	2.419460	2.419625	2.419791	165
263	2.420781	2.420945	2.421110	2.421275	2.421439	165
264	2.422426	2.422590	2.422754	2.422918	2.423082	164
265	2.424065	2.424228	2.424392	2.424555	2.424718	164
266	2.425697	2.425860	2.426023	2.426186	2.426349	163
267	2.427324	2.427486	2.427648	2.427811	2.427973	162
268	2.428944	2.429106	2.429268	2.429429	2.429591	162
269	2.430559	2.430720	2.430881	2.431042	2.431203	161
270	2.432167	2.432328	2.432488	2.432649	2.432809	160
271	2.433770	2.433930	2.434090	2.434249	2.434409	160
⊛	86	104	121	138	156	⊛

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
272	2.434569	2.434729	2.434888	2.435048	2.435207	159
273	2.436163	2.436322	2.436481	2.436640	2.436799	159
274	2.437751	2 437909	2.438067	2.438226	2.438384	158
275	2.439333	2.439491	2.439648	2.439806	2.439964	158
276	2.440909	2.441066	2.441224	2.441381	2.441538	157
277	2.442480	2.442637	2.442793	2.442950	2.443106	157
278	2.444045	2.444201	2.444357	2 444513	2.444669	156
279	2.445604	2.445760	2.445915	2.446071	2.446226	155
280	2.447158	2.447313	2.447468	2.447623	2.447778	155
281	2.448706	2.448861	2.449015	2.449170	2.449324	154
282	2.450249	2.450403	2.450557	2.450711	2.450865	154
283	2.451786	2.451940	2.452093	2.452247	2.452400	153
284	.453318	2.453471	2.453624	2.453777	2.453930	153
285	2.454845	2.454997	2.455150	2.455302	2.455454	152
286	2 456366	2.456518	2 456670	2.456821	2.456973	152
287	2.457882	2.458033	2.458184	2.458336	2.458487	151
288	2.459392	2.459543	2.459694	2.459845	2.459995	151
289	2.460898	2.461048	2.461198	2.461348	2.461499	150
290	2.462398	2.462548	2.462697	2.462847	2.462997	150
291	2.463893	2.464042	2.464191	2.464340	2.464490	149
292	2.465383	2.465532	2.465680	2.465829	2.465977	149
293	2.466868	2.467016	2.467164	2.467312	2.467460	148
294	2.468347	2.468495	2.468643	2.468790	2.468938	147
295	2.469822	2.469969	2.470116	2.470263	2.470410	147
296	2.471292	2.471438	2.471585	2.471732	2.471878	146
297	2.472756	2.472903	2.473049	2.473195	2.473341	146
298	2.474216	2.474362	2.474508	2.474653	2.474799	145
299	2.475671	2.475816	2.475962	2.476107	2.476252	145
300	2.477121	2.477266	2.477411	2.477555	2.477700	145
301	2.478566	2.478711	2.478855	2 478999	2.479143	144
302	2.480007	2.480151	2.480294	2.480438	2.480582	144
303	2.481443	2.481586	2 481729	2.481872	2.482016	143
304	2.482874	2.483016	2.483159	2.483302	2.483445	143
305	2.484300	2.484442	2.484584	2.484727	2.484869	142
306	2.485721	2.485863	2.486005	2.486147	2.486289	142
307	2.487138	2 487280	2.487421	2.487563	2.487704	141
308	2.488551	2.488692	2.488833	2 488973	2.489114	141
309	2.489958	2.490099	2.490239	2.490380	2.490520	140
310	2,491362	2.491502	2 491642	2.491782	2 491922	140
311	2.492760	2.492900	2.493040	2.493179	2.493319	139
312	2.494155	2.494294	2.494433	2.494572	2.494711	139
313	2.495544	2.495683	2.495822	2.495960	2.496099	139
314	2.496930	2.497068	2.497206	2.497344	2 497483	138
Dif.	148	15	30	44	59	

N°	5	6	7	8	9	Dif.
272	2.435367	2.435526	2.435685	2.435844	2.436004	159
273	2.436957	2.437116	2.437275	2.437433	2.437592	159
274	2.438542	2.438701	2.438859	2.439017	2.439175	158
275	2.440122	2.440279	2 440437	2.440594	2.440752	158
276	2.441695	2.441852	2.442009	2.442166	2.442323	157
277	2.443263	2.443419	2.443576	2.443732	2.443889	157
278	2.444825	2.444981	2.445137	2.445293	2.445449	156
279	2.446382	2.446537	2.446692	2.446848	2.447003	155
280	2.447933	2.448088	2.448242	2.448397	2.448552	155
281	2.449478	2.449633	2.449787	2.449941	2.450095	154
282	2.451018	2.451172	2.451326	2.451479	2.451633	154
283	2.452553	2.452706	2.452859	2.453012	2.453165	153
284	2.454082	2.454235	2.454387	2.454540	2.454692	153
285	2.455606	2.455758	2.455910	2.456062	2.456214	152
286	2.457125	2.457276	2.457428	2.457579	2.457731	152
287	2.458638	2.458789	2.458940	2.459091	2.459242	151
288	2.460146	2.460296	2.460447	2.460597	2.460748	151
289	2.461649	2.461799	2.461948	2.462098	2.462248	150
290	2.463146	2.463296	2.463445	2.463594	2.463741	150
291	2.464639	2.464788	2.464936	2.465085	2.465234	149
292	2.466126	2.466274	2.466423	2.466571	2.466719	149
293	2.467608	2.467756	2.467904	2.468052	2.468200	148
294	2.469085	2.469233	2.469380	2.469527	2.469675	147
295	2.470557	2.470704	2.470851	2.470998	2.471145	147
296	2.472025	2.472171	2.472318	2.472464	2.472610	146
297	2.473487	2.473633	2.473779	2.473925	2.474071	146
298	2.474944	2.475090	2.475235	2.475381	2.475526	146
299	2.476397	2.476542	2.476687	2.476832	2.476976	145
300	2.477844	2.477989	2.478133	2.478278	2.478422	145
301	2.479287	2.479431	2.479575	2.479719	2.479863	144
302	2.480725	2.480869	2.481012	2.481156	2.481299	144
303	2.482159	2.482302	2.482445	2.482588	2.482731	143
304	2.483587	2.483730	2.483872	2.484015	2.484157	143
305	2.485011	2.485153	2.485295	2.485437	2.485579	142
306	2.486430	2.486572	2.486714	2.486855	2.486997	142
307	2.487845	2.487986	2.488127	2.488269	2.488410	141
308	2.489255	2.489396	2.489537	2.489677	2.489818	141
309	2.490661	2.490801	2.490941	2.491081	2.491222	140
310	2.492062	2.492201	2.492341	2.492481	2.492621	140
311	2.493458	2.493597	2.493737	2.493876	2.494015	139
312	2.494850	2.494989	2.495128	2.495267	2.495406	139
313	2.496238	2.496376	2.496514	2.496653	2.496791	139
314	2.497621	2.497759	2.497897	2.498035	2.498173	138
⊙	75	89	104	118	133	Pts.

A TABLE of LOGARITHMS,

No	0	1	2	3	4	Dif.
315	2.498311	2.498448	2.498586	2.498724	2.498862	138
316	2.499687	2.499824	2.499962	2.500099	2.500236	137
317	2.501059	2.501196	2.501333	2.501470	2.501607	137
318	2.502427	2.502564	2.502700	2.502837	2.502973	136
319	2.503791	2.503927	2.504063	2.504199	2.504335	136
320	2.505150	2.505286	2.505421	2.505557	2.505693	136
321	2.506505	2.506640	2.506776	2.506911	2.507046	135
322	2.507856	2.507991	2.508126	2.508260	2.508395	135
323	2.509203	2.509337	2.509471	2.509606	2.509740	134
324	2.510545	2.510679	2.510813	2.510947	2.511081	134
325	2.511883	2.512017	2.512151	2.512284	2.512418	133
326	2.513218	2.513351	2.513484	2.513617	2.513750	133
327	2.514548	2.514680	2.514813	2.514946	2.515079	123
328	2.515874	2.516006	2.516139	2.516271	2.516403	132
329	2.517196	2.517328	2.517460	2.517592	2.517724	132
330	2.518514	2.518646	2.518777	2.518909	2.519040	132
331	2.519828	2.519959	2.520090	2.520221	2.520353	131
332	2.521138	2.521269	2.521400	2.521530	2.521661	131
333	2.522444	2.522575	2.522705	2.522835	2.522966	130
334	2.523746	2.523876	2.524006	2.524136	2.524266	130
335	2.525045	2.525174	2.525304	2.525434	2.525563	130
336	2.526339	2.526469	2.526598	2.526727	2.526856	129
337	2.527630	2.527759	2.527888	2.528016	2.528145	129
338	2.528917	2.529045	2.529174	2.529302	2.529430	128
339	2.530200	2.530328	2.530456	2.530584	2,530712	128
340	2.531479	2.531607	2.531734	2.531862	2.531990	128
341	2.532754	2.532882	2.533009	2.533136	2.533264	127
342	2.534026	2.534153	2.534280	2.534407	2.534534	127
343	2.535294	2.535421	2.535547	2.535674	2.535800	126
344	2.536558	2.536685	2.536811	2.536937	2.537063	126
345	2.537819	2.537945	2.538071	2.538197	2.538322	126
346	2.539076	2.539202	2.539327	2.539452	2.539578	125
347	2.540329	2.540455	2.540580	2.540705	2.540830	125
348	2.541579	2.541704	2.541829	2.541953	2.542078	125
349	2.542825	2.542950	2.543074	2.543199	2.543323	124
350	2.544068	2.544192	2.544316	2.544440	2.544564	124
351	2.545307	2.545431	2.545555	2.545678	2.545802	124
352	2.546543	2.546666	2.546789	2.546913	2.547036	123
353	2.547775	2.547898	2.548021	2.548144	2.548267	123
354	2.549003	2.549126	2.549249	2.549371	2.549494	123
355	2.550228	2.550351	2.550473	2.550595	2.550717	122
356	2.551450	2.551572	2.551694	2.551816	2.551938	122
357	2.552668	2.552790	2.552911	2.553033	2.553155	121
Dif.	129	13	26	39	52	

N°	5	6	7	8	9	Dif.
315	2.498999	2.499137	2.499275	2.499412	2.499550	138
316	2.500374	2.500511	2.500648	2.500785	2.500922	137
317	2.501744	2.501880	2.502017	2.502154	2.502291	137
318	2.503109	2.503246	2.503382	2 503518	2.503655	136
319	2.504471	2.504607	2.504743	2.504878	2.505014	136
320	2.505828	2.505964	2.506099	2.506234	2.506370	136
321	2.507181	2.507316	2.507451	2.507586	2.507721	135
322	2.508530	2.508664	2.508799	2.508934	2.509068	135
323	2.509874	2.510009	2.510143	2.510277	2.510411	134
324	2.511215	2.511349	2.511482	2.511616	2.511750	134
325	2.512551	2.512684	2.512818	2.512951	2.513084	133
326	2.513883	2.514016	2.514149	2.514282	2.514415	133
327	2.515211	2.515344	2.515476	2.515609	2.515741	133
328	2.516535	2.516668	2.516800	2.516932	2.517064	132
329	2.517855	2.517987	2 518119	2 518251	2.518382	132
330	2.519171	2.519303	2.519434	2.519565	2.519697	132
331	2.520483	2.520614	2.520745	2.520876	2.521007	131
332	2.521792	2.521922	2.522053	2.522183	2.522314	131
333	2.523096	2.523226	2 523356	2.523486	2.523616	130
334	2.524396	2.524526	2.524656	2.524785	2.524915	130
335	2.525693	2.525822	2.525951	2.526081	2.526210	129
336	2.526985	2.527114	2.527243	2.527372	2.527501	129
337	2.528274	2.528402	2.528531	2.528660	2.528788	129
338	2.529559	2.529687	2.529815	2.529943	2.530072	128
339	2.530840	2.530968	2.531096	2.531223	2.531351	128
340	2.532117	2.532245	2 532372	2.532500	2.532627	128
341	2.533391	2.533518	2.533645	2.533772	2.533899	127
342	2.534661	2.534787	2 534914	2.535041	2.535167	127
343	2.535927	2.536053	2.536179	2.536306	2.536432	126
344	2.537189	2.537315	2.537441	2.537567	2.537693	126
345	2.538448	2.538574	2.538699	2.538825	2.538951	126
346	2.539703	2.539829	2.539954	2.540079	2.540204	125
347	2.540955	2.541080	2.541205	2.541330	2.541454	125
348	2.542203	2.542327	2.542452	2.542576	2.542701	125
349	2.543447	2.543571	2.543696	2.543820	2.543944	124
350	2.544688	2.544812	2.544936	2.545060	2.545183	124
351	2.545925	2.546049	2.546172	2.546296	2.546419	124
352	2.547159	2.547282	2.547405	2.547529	2.547652	123
353	2.548389	2.548512	2.548635	2.548758	2.548881	123
354	2.549616	2.549739	2.549861	2.549984	2.550106	123
355	2.550840	2.550962	2.551084	2.551206	2 551328	122
356	2.552060	2.552181	2.552303	2.552425	2.552547	122
357	2.553276	2.553398	2.553519	2.553640	2.553762	121
	64	77	90	103	116	

A TABLE of LOGARITHMS,

No	0	1	2	3	4	Dif
358	2.553883	2.554004	2.554126	2.554247	2.554368	121
359	2.555094	2.555215	2.555336	2.555457	2.555578	121
360	2.556302	2.556423	2.556544	2.556664	2.556785	121
361	2.557507	2.557627	2.557748	2.557868	2.557988	120
362	2.558709	2.558829	2.558948	2.559068	2.559188	120
363	2.559907	2.560026	2.560146	2.560265	2.560385	120
364	2.561101	2.561221	2.561340	2.561459	2.561578	119
365	2.562293	2.562412	2.562531	2.562650	2.562769	119
366	2.563481	2.563600	2.563718	2.563837	2.563955	119
367	2.564666	2.564784	2.564903	2.565021	2.565139	118
368	2.565848	2.565966	2.566084	2.566202	2.566320	118
369	2.567026	2.567144	2.567262	2.567379	2.567497	118
370	2.568202	2.568319	2.468436	2.568554	2.568671	117
371	2.569374	2.569491	2.569608	2.569725	2.569842	117
372	2.570543	2.570660	2.570776	2.570893	2.571010	117
373	2.571709	2.571825	2.571942	2.572058	2.572174	116
374	2.572872	2.572988	2.573104	2.573220	2.573336	116
375	2.574031	2.574147	2.574263	2.574379	2.574494	116
376	2.575188	2.575303	2.575419	2.575534	2.575650	115
377	2.576341	2.576457	2.576572	2.576687	2.576802	115
378	2.577492	2.577607	2.577721	2.577836	2.577951	115
379	2.578639	2.578754	2.578868	2.578983	2.579097	114
380	2.579784	2.579898	2.580012	2.580126	2.580240	114
381	2.580925	2.581 39	2.581153	2.581267	2.581381	114
382	2.582063	2.582177	2.582291	2.582404	2.582518	114
383	2.583199	2.5833 2	2.583426	2.583539	2.583652	113
384	2.584331	2.584444	2.584557	2.58467	2.584783	113
385	2.585461	2.585574	2.585686	2.585799	2.585912	113
386	2.586587	2.586700	2.586812	2.586925	2.587037	112
387	2.587711	2.587823	2.587935	2.588047	2.588160	112
388	2.588832	2.588944	2.589056	2.589167	2.589279	112
389	2.58995	2.5900 1	2.590173	2.590284	2.590396	112
390	2.591065	2.591176	2.591287	2.591399	2.591510	111
391	2.592177	2.592288	2.592399	2.592510	2.592621	111
392	2.593286	2.593397	2.593508	2.593618	2.593729	111
393	2.594393	2.594503	2.594614	2.594724	2.594834	110
394	2.595496	2.595606	2.595717	2.595827	2.595937	110
395	2.596597	2.596707	2.596817	2.596927	2.597037	110
396	2.597695	2.597805	2.597914	2.598024	2.598134	110
397	2.598791	2.598900	2.599009	2.599119	2.599228	109
398	2.599883	2.599992	2.600101	2.600210	2.600319	109
399	2.600973	2.601082	2.601191	2.601299	2.601408	109
400	2.602060	2.602169	2.602277	2.602386	2.602494	108
Dif.	114	11	23	34	46	

N°	5	6	7	8	9	Dif.
358	2.554489	2.554610	2.554731	2.554852	2.554973	121
359	2.555699	2.555820	2.555940	2.556061	2.556182	121
360	2.556905	2.557026	2.557146	2.557267	2.557387	121
361	2.558108	2.558228	2.558349	2.558469	2.558589	120
362	2.559308	2.559428	2.559548	2.559667	2.559787	120
363	2.560504	2.560624	2.560743	2.560863	2.560982	120
364	2.561698	2.561817	2.561936	2.562055	2.562174	119
365	2.562887	2.563006	2.563125	2.563244	2.563362	119
366	2.564074	2.564192	2.564311	2.564429	2.564548	119
367	2.565257	2.565376	2.565494	2.565612	2.565730	118
368	2.566437	2.566555	2.566673	2.566791	2.566909	118
369	2.567614	2.567732	2.567849	2.567967	2.568084	118
370	2.568788	2.568905	2.569023	2.569140	2.569257	117
371	2.569959	2.570076	2.570193	2.570309	2.570426	117
372	2.571126	2.571243	2.571359	2.571476	2.571592	117
373	2.572291	2.572407	2.572523	2.572639	2.572755	116
374	2.573452	2.573568	2.573684	2.573800	2.573915	116
375	2.574610	2.574726	2.574841	2.574957	2.575072	116
376	2.575765	2.575880	2.575996	2.576111	2.576226	115
377	2.576917	2.577032	2.577147	2.577262	2.577377	115
378	2.578066	2.578181	2.578295	2.578410	2.578525	115
379	2.579212	2.579326	2.579441	2.579555	2.579669	114
380	2.580355	2.580469	2.580583	2.580697	2.580811	114
381	2.581495	2.581608	2.581722	2.581836	2.581950	114
382	2.582631	2.582745	2.582858	2.582972	2.583085	114
383	2.583765	2.583879	2.583992	2.584105	2.584218	113
384	2.584896	2.585009	2.585122	2.585235	2.585348	113
385	2.586024	2.586137	2.586250	2.586362	2.586475	113
386	2.587149	2.587262	2.587374	2.587486	2.587599	112
387	2.588272	2.588384	2.588496	2.588608	2.588720	112
388	2.589391	2.589503	2.589615	2.589726	2.589838	112
389	2.590507	2.590619	2.590730	2.590842	2.590953	112
390	2.591621	2.591732	2.591843	2.591955	2.592066	111
391	2.592732	2.592843	2.592954	2.593064	2.593175	111
392	2.593840	2.593950	2.594061	2.594171	2.594282	111
393	2.594945	2.595055	2.595165	2.595276	2.595386	110
394	2.596047	2.596157	2.596267	2.596377	2.596487	110
395	2.597146	2.597256	2.597366	2.597476	2.597586	110
396	2.598243	2.598353	2.598462	2.598572	2.598681	110
397	2.599337	2.599446	2.599556	2.599665	2.599774	109
398	2.600428	2.600537	2.600646	2.600755	2.600864	109
399	2.601517	2.601625	2.601734	2.601843	2.601951	109
400	2.602603	2.602711	2.602819	2.602928	2.603036	108
❁	57	68	80	91	103	Pts

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
401	2.603144	2.603253	2.603361	2.603469	2.603577	108
402	2.604226	2.604334	2.604442	2.604550	2.604658	108
403	2.605305	2.605413	2.605521	2.605628	2.605736	108
404	2.606381	2.606489	2.606596	2.606704	2.606811	107
405	2.607455	2.607562	2.607669	2.607777	2.607884	107
406	2.608526	2.608633	2.608740	2.608847	2.608954	107
407	2.609594	2.609701	2.609808	2.609914	2.610021	107
408	2.610660	2.610767	2.610873	2.610979	2.611086	106
409	2.611723	2.611829	2.611936	2.612042	2.612148	106
410	2.612784	2.612890	2.612996	2.613102	2.613207	106
411	2.613842	2.613947	2.614053	2.614159	2.614264	106
412	2.614897	2.615003	2.615108	2.615213	2.615319	105
413	2.615950	2.616055	2.616160	2.616265	2.616370	105
414	2.617000	2.617105	2.617210	2.617315	2.617420	105
415	2.618048	2.618153	2.618257	2.618362	2.618466	105
416	2.619093	2.619198	2.619302	2.619406	2.619511	104
417	2.620136	2.620240	2.620344	2.620448	2.620552	104
418	2.621176	2.621280	2.621384	2.621488	2.621592	104
419	2.622214	2.622318	2.622421	2.622525	2.622628	104
420	2.623249	2.623353	2.623456	2.623559	2.623663	103
421	2.624282	2.624385	2.624488	2.624591	2.624694	103
422	2.625312	2.625415	2.625518	2.625621	2.625724	103
423	2.626340	2.626443	2.626546	2.626648	2.626751	103
424	2.627366	2.627468	2.627571	2.627673	2.627775	102
425	2.628389	2.628491	2.628593	2.628695	2.628797	102
426	2.629410	2.629512	2.629613	2.629715	2.629817	102
427	2.630428	2.630530	2.630631	2.630733	2.630835	102
428	2.631444	2.631545	2.631647	2.631748	2.631849	101
429	2.632457	2.632559	2.632660	2.632761	2.632862	101
430	2.633468	2.633569	2.633670	2.633771	2.633872	101
431	2.634477	2.634578	2.634679	2.634779	2.634880	100
432	2.635484	2.635584	2.635685	2.635785	2.635886	100
433	2.636488	2.636588	2.636688	2.636789	2.636889	100
434	2.637490	2.637590	2.637690	2.637790	2.637890	100
435	2.638489	2.638589	2.638689	2.638789	2.638888	99
436	2.639486	2.639586	2.639686	2.639785	2.639885	99
437	2.640481	2.640581	2.640680	2.640779	2.640879	99
438	2.641474	2.641573	2.641672	2.641771	2.641871	99
439	2.642465	2.642563	2.642662	2.642761	2.642860	99
440	2.643453	2.643551	2.643650	2.643749	2.643847	98
441	2.644439	2.644537	2.644636	2.644734	2.644832	98
442	2.645422	2.645521	2.645619	2.645717	2.645815	98
443	2.646404	2.646502	2.646600	2.646698	2.646796	98
Dif.	103	10	21	31	41	

N°	5	6	7	8	9	Dif
401	2.603686	2.603794	2.603902	2.604010	2.604118	108
402	2.604766	2.604874	2.604982	2.605089	2.605197	108
403	2.605844	2.605951	2.606059	2.606166	2.606274	108
404	2.606919	2.607026	2.607133	2.607241	2.607348	107
405	2.607991	2.608098	2.608205	2.608312	2.608419	107
406	2.609061	2.609167	2.609274	2.609381	2.609488	107
407	2.610128	2.610234	2.610341	2 610447	2.610554	107
408	2.611192	2.611298	2.611405	2.611511	2.611617	106
409	2.612254	2.612360	2.612466	2.612572	2.612678	106
410	2.613313	2.613419	2.613525	2.613630	2.613736	106
411	2.614370	2.614475	2.614581	2.614686	2.614792	106
412	2.615424	2.615529	2.615634	2.615740	2.615845	105
413	2.616476	2.616581	2.616686	2.616790	2.616895	105
414	2.617525	2.617629	2.617734	2.617839	2.617943	105
415	2.618571	2.618676	2.618780	2.618884	2.618989	105
416	2.619615	2.619719	2.619824	2.619928	2.620032	104
417	2.620656	2.620760	2.620864	2.620968	2.621072	104
418	2.621695	2.621799	2.621903	2.622007	2.622110	104
419	2.622732	2.622835	2.622939	2.623042	2.623146	104
420	2.623766	2.623869	2.623973	2.624076	2.624179	103
421	2.624798	2.624901	2.625004	2.625107	2.625210	103
422	2.225827	2.625929	2.626032	2.626135	2.626238	103
423	2.226853	2.626956	2.627058	2.627161	2.627263	103
424	2.627878	2.627980	2.628082	2.628185	2.628287	102
425	2.628900	2.629002	2.629104	2.629206	2.629308	102
426	2.629919	2.630021	2.630123	2.630224	2.630326	102
427	2.630936	2.631038	2.631139	2.631241	2.631342	102
428	2.631951	2.632052	2.632153	2.632255	2.632356	101
429	2.632963	2.633064	2.633165	2.633266	2.633367	101
430	2.633973	2.634074	2.634175	2.634276	2.634376	100
431	2.634981	2.635081	2.635182	2.635283	2.635383	100
432	2.635986	2.636087	2 636187	2.636287	2.636388	100
433	2.636989	2.637089	2.637189	2.637290	2.637390	100
434	2.637990	2.638090	2.638190	2.638290	2.638389	100
435	2.638988	2.639088	2.639188	2.639287	2.639387	99
436	2.639984	2.640084	2.640183	2.640283	2.640382	99
437	2.640978	2.641077	2.641177	2.641276	2.641375	99
438	2.641970	2.642069	2.642168	2.642267	.642366	99
439	2.642959	2.643058	2.643156	2.643255	2.643354	99
440	2.643946	2.644044	2.644143	2 644242	2.644340	98
441	2.644931	2.645029	2.645127	2.645226	2.645324	98
442	2.645913	2.646011	2.646110	2.646208	2.646306	98
443	2.646894	2.646992	2.647089	2.647187	2.647285	98
	51	62	72	82	93	Pts.

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
444	2.647383	2.647481	2.647579	2.647676	2.647774	98
445	2.648360	2.648458	2.648555	2.648653	2.648750	97
446	2.649335	2.649432	2.649530	2.649627	2.649724	97
447	2.650308	2.650405	2.650502	2.650599	2.650696	97
448	2.651278	2.651375	2.651472	2.651569	2.651666	97
449	2.652246	2.652343	2.652440	2.652536	2.652633	97
450	2.653213	2.653309	2.653405	2.653502	2.653598	96
451	2.654177	2.654273	2.654369	2.654465	2.654562	96
452	2.655138	2.655235	2.655331	2.655427	2.655523	96
453	2.656098	2.656194	2.656290	2.656386	2.656482	96
454	2.657056	2.657152	2.657247	2.657343	2.657438	96
455	2.658011	2.658107	2.658202	2.658298	2.658393	95
456	2.658965	2.659060	2.659155	2.659250	2.659346	95
457	2.659916	2.660011	2.660106	2.660201	2.660296	95
458	2.660865	2.660960	2.661055	2.661150	2.661245	95
459	2.661813	2.661907	2.662002	2.662096	2.662191	95
460	2.662758	2.662852	2.662947	2.663041	2.663135	94
461	2.663701	2.663795	2.663889	2.663983	2.664078	94
462	2.664642	2.664736	2.664830	2.664924	2.665018	94
463	2.665581	2.665675	2.665769	2.665862	2.665956	94
464	2.666518	2.666612	2.666705	2.666799	2.666892	94
465	2.667453	2.667546	2.667640	2.667733	2.667826	93
466	2.668386	2.668479	2.668572	2.668665	2.668759	93
467	2.669317	2.669410	2.669503	2.669596	2.669689	93
468	2.670246	2.670339	2.670431	2.670524	2.670617	93
469	2.671173	2.671265	2.671358	2.671451	2.671543	93
470	2.672098	2.672190	2.672283	2.672375	2.672467	92
471	2.673021	2.673113	2.673205	2.673297	2.673390	92
472	2.673942	2.674034	2.674126	2.674218	2.674310	92
473	2.674861	2.674953	2.675045	2.675137	2.675228	92
474	2.675778	2.675870	2.675962	2.676053	2.676145	92
475	2.676694	2.676785	2.676876	2.676968	2.677059	91
476	2.677607	2.677698	2.677789	2.677881	2.677972	91
477	2.678518	2.678609	2.678700	2.678791	2.678882	91
478	2.679428	2.679519	2.679610	2.679700	2.679791	91
479	2.680336	2.680426	2.680517	2.680607	2.680698	91
480	2.681241	2.681332	2.681422	2.681513	2.681603	90
481	2.682145	2.682235	2.682326	2.682416	2.682506	90
482	2.683047	2.683137	2.683227	2.683317	2.683407	90
483	2.683947	2.684037	2.684127	2.684217	2.684307	90
484	2.684845	2.684935	2.685025	2.685114	2.685204	90
485	2.685742	2.685831	2.685921	2.686010	2.686100	89
486	2.686636	2.686726	2.686815	2.686904	2.686994	89
Dif	93	9	19	28	37	

N°	5	6	7	8	9	Dif.
444	2.647872	2.647969	2.648067	2.648165	2.648262	98
445	2.648848	2.648945	2.649043	2.649140	2.649237	97
446	2.649821	2.649919	2.650016	2.650113	2.650210	97
447	2.650793	2.650890	2.650987	2 651084	2 651181	97
448	2.651762	2.651859	2.651956	2.652053	2.652150	97
449	2.652730	2.652826	2.652923	2.653019	2.653116	97
450	2.653695	2.653791	2.653888	2.653984	2.654080	96
451	2.654658	2.654754	2.654850	2.654946	2.655042	96
452	2.655619	2.655715	2.655810	2.655906	2.656002	96
453	2.656577	2.656673	2.656769	2.6;6864	2.656960	96
454	2 657534	2.657629	2.657725	2.657820	2.657916	96
455	2.658488	2.658584	2.658679	2.658774	2.658870	95
456	2.659441	2.659536	2.659631	2.659726	2.659821	95
457	2.660391	2.660486	2.660581	2.660676	2.660771	95
458	2.661339	2.661434	2 661529	2 661623	2.661718	95
459	2.662286	2.662380	2.662475	2.662569	2.662663	95
460	2.663230	2.663324	2.663418	2.663512	2.663607	94
461	2.664172	2.664266	2.664360	2.664454	2.664548	94
462	2.665112	2.665206	2 665299	2.665393	2.665487	94
463	2.666050	2.666143	2.666237	2.666331	2.666424	94
464	2.666986	2.667079	2.667173	2.667266	2.667360	94
465	2.667920	2.668013	2.668106	2.668199	2.668293	93
466	2.668852	2.668945	2.669038	2.669131	2.669224	93
467	2.669782	2,669875	2.669967	2.670060	2.670153	93
468	2.670710	2.670802	2.670895	2.670988	2.671080	93
469	2.671636	2.671728	2 671821	2 671913	2.672005	93
470	2.672560	2.672652	2.672743	2.672836	2.672929	92
471	2.673482	2.673574	2 6736 6	2.673758	2.673850	92
472	2.674402	2.674494	2.674586	2.674677	2.674769	92
473	2.675320	2.675412	2.675503	2.675595	2.675687	92
474	2.676236	2.676328	2.676419	2.676511	2.676602	92
475	2.677151	2.677242	2.677333	2.677424	2.677516	91
476	2.678063	2.678154	2.678245	2.678336	2.678427	91
477	2.678973	2.679064	2.679155	2.679246	2.679337	91
478	2.679882	2.679973	2.680063	2.680154	2.680245	91
479	2.680789	2.680879	2.680970	2.681060	2.681151	91
480	2.681693	2.681784	2.681874	2.681964	2.682055	90
481	2.682596	2.682685	2.682777	2.682867	2.682957	90
482	2.683497	2.683587	2.683677	2.683767	2.683857	90
483	2.684396	2.684486	2.684576	2.684666	2.684756	90
484	2.685294	2.685383	2.685473	2.685563	2 685652	90
485	2.686189	2.686279	2.686368	2.686457	2.686547	89
486	2.687083	2.687172	2.687261	2.687351	2.687440	89
⊜	46	56	65	74	84	Pts.

N°	0	1	2	3	4	Dif.
487	2.687529	2.687618	2.687707	2.687796	2.687886	89
488	2.688420	2.688509	2.688598	2.688687	2.688776	89
489	2.689309	2.689398	2.689486	2.689575	2.689664	89
490	2.690196	2.690285	2.690373	2.690462	2.690550	89
491	2.691081	2.691170	2.691258	2.691347	2.691435	88
492	2.691965	2.692053	2.692142	2.692230	2.692318	88
493	2.692847	2.692935	2.693023	2.693111	2.693199	88
494	2.693727	2.693815	2.693903	2.693991	2.694078	88
495	2.694605	2.694693	2.694781	2.694868	2.694956	88
496	2.695482	.695569	2.695657	2.695744	2.695832	87
497	2.696356	2.696444	2.696531	2.696618	2.696706	87
498	2.697229	2.697317	2.697404	2.697491	2.697578	87
499	2.698100	2.698188	2.698275	2.698362	2.698449	87
500	2.698970	2.699057	2.699144	2.699231	2.699317	87
501	2.699838	2.699924	2.700011	2.700098	2.700184	87
502	2.700704	2.700790	2.700877	2.700963	2.701050	86
503	2.701568	2.701654	2.701741	2.701827	2.701913	86
504	2.702431	2.702517	2.702603	2.702689	2.702775	86
505	2.703291	2.703377	2.703463	2.703549	2.703635	86
506	2.704151	2.704236	2.704322	2.704408	2.704494	86
507	2.705008	2.705094	2.705179	2.705265	2.705350	86
508	2.705864	2.705949	2.706035	2.706120	2.706206	85
509	2.706718	2.706803	2.706888	2.706974	2.707059	85
510	2.707570	2.707655	2.707740	2.707826	2.707911	85
511	2.708421	2.708506	2.708591	2.708676	2.708761	85
512	2.709270	2.709355	2.709440	2.709524	2.709609	85
513	2.710117	2.710202	2.710287	2.710371	2.710456	85
514	2.710963	2.711048	2.711132	2.711217	2.711301	84
515	2.711807	2.711892	2.711976	2.712060	2.712144	84
516	2.712650	2.712734	2.712818	2.712902	2.712986	84
517	2.713491	2.713575	2.713659	2.713742	2.713826	84
518	2.714330	2.714414	2.714497	2.714581	2.714665	84
519	2.715167	2.715251	2.715335	2.715418	2.715502	84
520	2.716003	2.716087	2.716170	2.716254	2.716337	83
521	2.716838	2.716921	2.717004	2.717088	2.717171	83
522	2.717671	2.717754	2.717837	2.717920	2.718003	83
523	2.118502	2.718585	2.718668	2.718751	2 718834	83
524	2.719331	2.719414	2.719497	2.719580	2.719663	83
525	2.720159	2.720242	2.720325	2.720407	2.720490	83
526	2.720986	2.721068	2.721151	2.721233	2.721316	82
527	2.721811	2.721893	2.721975	2.722058	2.722140	82
528	2.722634	2.722716	2.722798	2.722881	2 722963	82
529	2.723456	2.723538	2.723620	2.723702	2.723784	82
Dif.	85	8	17	25	34	

N°	5	6	7	8	9	Dif.
487	2.687975	2.688064	2.688153	2.688242	2.688331	89
488	2.688865	2.688953	2.689042	2.689131	2.689220	89
489	2.689753	2.689841	2.689930	2.690019	2.690107	89
490	2.690639	2.690728	2.690816	2.690905	2.690993	89
491	2.691524	2.691612	2.691700	2.691789	2.691877	88
492	2.692406	2.692494	2.692583	2.692671	2.692759	88
493	2.693287	2.693375	2.693463	2.693551	2.693639	88
494	2.694166	2.694254	2.694342	2.694430	2.694517	88
495	2.695044	2.695131	2.695219	2.695307	2.695394	88
496	2.695919	2.696007	2.696094	2.696182	2.696269	87
497	2.696793	2.696880	2.696968	2.697055	2.697142	87
498	2.697665	2.697752	2.697839	2.697926	2.698014	87
499	2.698535	2.698622	2.698709	2.698796	2.698883	87
500	2.699404	2.699491	2.699578	2.699664	2.699751	87
501	2.700271	2.700358	2.700444	2.700531	2.700617	87
502	2.701136	2.701222	2.701309	2.701395	2.701482	86
503	2.701999	2.702086	2.702172	2.702258	2.702344	86
504	2.702861	2.702947	2.703033	2.703119	2.703205	86
505	2.703721	2.703807	2.703893	2.703979	2.704065	86
506	2.704579	2.704665	2.704751	2.704837	2.704922	86
507	2.705436	2.705522	2.705607	2.705693	2.705778	86
508	2.706291	2.706376	2.706462	2.706547	2.706632	85
509	2.707144	2.707229	2.707315	2.707400	2.707485	85
510	2.707996	2.708081	2.708166	2.708251	2.708336	85
511	2.708846	2.708931	2.709015	2.709100	2.709185	85
512	2.709694	2.709779	2.709863	2.709948	2.710033	85
513	2.710540	2.710625	2.710710	2.710794	2.710879	85
514	2.711385	2.711470	2.711554	2.711638	2.711723	84
515	2.712229	2.712313	2.712397	2.712481	2.712566	84
516	2.713070	2.713154	2.713238	2.713323	2.713407	84
517	2.713910	2.713994	2.714078	2.714162	2.714246	84
518	2.714749	2.714833	2.714916	2.715000	2.715084	84
519	2.715586	2.715669	2.715753	2.715836	2.715920	84
520	2.716421	2.716504	2.716588	2.716671	2.716754	83
521	2.717254	2.717338	2.717421	2.717504	2.717587	83
522	2.718086	2.718169	2.718253	2.718336	2.718419	83
523	2.718917	2.719000	2.719083	2.719165	2.719248	83
524	2.719745	2.719828	2.719911	2.719994	2.720077	83
525	2.720573	2.720655	2.720738	2.720821	2.720903	83
526	2.721398	2.721481	2.721563	2.721646	2.721728	82
527	2.722222	2.722305	2.722387	2.722469	2.722552	82
528	2.723045	2.723127	2.723209	2.723291	2.723374	82
529	2.723866	2.723948	2.724030	2.724112	2.724194	82
⊛	42	51	59	68	76	Pts

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
530	2.724276	2.724358	2.724440	2.724522	2.724604	82
531	2.725095	2.725176	2.725258	2.725340	2.725422	82
532	2.725912	2.725993	2.726075	2.726156	2.726238	82
533	2.726727	2.726809	2.726890	2.726972	2.727053	81
534	2.727541	2.727623	2.727704	2.727785	2.727866	81
535	2.728354	2.728435	2.728516	2.728597	2.728678	81
536	2.729165	2.729246	2.729327	2.729408	2.729489	81
537	2.729974	2.730055	2.730136	2.730217	2.730298	81
538	2.73 782	2.730863	2.730944	2.731024	2.731105	81
539	2.731589	2.731669	2.731750	2.731830	2.731911	81
540	2.732394	2.732474	2.732555	2.732635	2.732715	80
541	2.733197	2.733278	2.733358	2.733438	2.733518	80
542	2.733999	2.734079	2.734160	2.734240	2.734320	80
543	2.734800	2.734880	2.734960	2.735040	2.735120	80
544	2.735599	2.735679	2.735759	2.735838	2.735918	80
545	2.736397	2.736476	2.736556	2.736635	2.736715	80
546	2.737193	2.737272	2.737352	2.737431	2.737511	79
547	2.737987	2.738067	2.738146	2.738225	2.738305	79
548	2.738781	2.738860	2.738939	2.739018	2.739097	79
549	2.739572	2.739651	2.739731	2.739810	2.739889	79
550	2.740363	2.740442	2.740521	2.740600	2.740678	79
551	2.741152	2.741230	2.741309	2.741388	2.741467	79
552	2.741939	2.742018	2.742096	2.742175	2.742254	79
553	2.742725	2.742804	2.742882	2.742961	2.743039	78
554	2.743510	2.743588	2.743667	2.743745	2.743823	78
555	2.744293	2.744371	2.744449	2.744528	2.744606	78
556	2.745075	2.745153	2.745231	2.745309	2.745387	78
557	2.745855	2.745933	2.746011	2.746089	2.746167	78
558	2.746634	2.746712	2.746790	2.746868	2.746945	78
559	2.747412	2.747489	2.747567	2.747645	2.747722	78
560	2.748188	2.748266	2.748343	2.748421	2.748498	77
561	2.748963	2.749040	2.749118	2.749195	2.749272	77
562	2.749736	2.749814	2.749891	2.749968	2.750045	77
563	2.750508	2.750586	2.750663	2.750740	2.750817	77
564	2.751279	2.751356	2.751433	2.751510	2.751587	77
565	2.752048	2.752125	2.752202	2.752279	2.752356	77
566	2.752816	2.752893	2.752970	2.753047	2.753123	77
567	2.753583	2.753660	2.753736	2.753813	2.753889	77
568	2.754348	2.754425	2.754501	2.754578	2.754654	77
569	2.755112	2.755189	2.755265	2.755341	2.755417	76
570	2.755875	2.755951	2.756027	2.756103	2.756180	76
571	2.756636	2.756712	2.756788	2.756864	2.756940	76
572	2.757396	2.757472	2.757548	2.757624	2.757700	76
Dif.	79	8	16	24	32	⚙

N°	5	6	7	8	9	Dif.
530	2.724685	2.724767	2.724849	2.724931	2.725013	82
531	2.725503	2.725585	2.725667	2.725748	2.725830	82
532	2.726320	2.726401	2.726483	2.726564	2.726646	82
533	2.727134	2.727216	2.727297	2.727379	2.727460	81
534	2 727948	2.728029	2.728110	2.728191	2.728273	81
535	2.728759	2.728841	2.728922	2 729003	2.729084	81
536	2.729570	2.729651	2.729732	2.729813	2.729893	81
537	2.730378	2.730459	2.730540	2.730621	2.730701	81
538	2.731186	2.731266	2.731347	2.731428	2.731508	81
539	2.731991	2.732072	2.732152	2.732233	2.732313	81
540	2.732796	2.732876	2.732956	2.733037	2.733117	80
541	2.733598	2.733679	2.733759	2.733839	2.733919	80
542	2.734400	2.734480	2.734560	2.734640	2.734720	80
543	2.735200	2.735279	2.735359	2.735439	2.735519	80
544	2.735998	2.736078	2.736157	2.736237	2 736317	80
545	2.736795	2.736874	2.736954	2.737034	2.737113	80
546	2.737590	2.737670	2.737749	2.737829	2.737908	79
547	2.738384	2.738463	2.738543	2.738622	2.738701	79
548	2.739177	2.739256	2.739335	2.739414	2.739493	79
549	2.739968	2.740047	2.740126	2.740205	2.740284	79
540	2.740757	2.740836	2.740915	2.740994	2.741073	79
551	2.741546	2.741624	2.741703	2.741782	2.741860	79
552	2.742332	2.742411	2.742489	2.742568	2.742647	79
553	2.743118	2.743196	2.743275	2.743353	2.743431	78
554	2.743902	2.743980	2.744058	2.744136	2.744215	78
555	2.744684	2.744762	2.744840	2.744919	2.744997	78
556	2.745465	2.745543	2.745621	2.745699	2.745777	78
557	2.746245	2.746323	2.746401	2.746478	2.746556	78
558	2.747023	2.747101	2.747179	2.747256	2.747334	78
559	2.747800	2.747878	2.747955	2.748033	2.748110	78
560	2.748576	2.748653	2.748731	2.748808	2.748885	77
561	2.749350	2.749427	2.749504	2.749582	2.749659	77
562	2.750123	2.750200	2.750277	2.750354	2.750431	77
563	2.750894	2.750971	2.751048	2.751125	2.751202	77
564	2.751664	2.751741	2.751818	2.751895	2.751972	77
565	2.752433	2.752509	2.752586	2.752662	2.752740	77
566	2.753200	2.753277	2.753353	2.753430	2.753506	77
567	2.753966	2.754042	2.754119	2.754195	2.754272	77
568	2.754730	2.754807	2.754883	2.754960	2.755036	76
569	2.755494	2.755570	2.755646	2.755722	2.755799	76
570	2.756256	2.756332	2.756408	2.756484	2.756560	76
571	2.757016	2.757092	2.757168	2.757244	2.757320	76
572	2.757775	2.757851	2.757927	2.758003	2.758079	76
⚙	39	47	55	63	71	Pts

N°	0	1	2	3	4	Dif.
573	2.758155	2.758230	2.758306	2.758382	2.758458	76
574	2.758912	2.758988	2.759063	2.759139	2.759214	76
575	2.759668	2.759743	2.759819	2.759894	2.759970	75
576	2.760422	2.760498	2.760573	2.760649	2.760724	75
577	2.761176	2.761251	2.761326	2.761402	2.761477	75
578	2.761928	2.762003	2.762078	2.762153	2.762228	75
579	2.762679	2.762754	2.762829	2.762904	2.762978	75
580	2.763428	2.763503	2.763578	2.763653	2.763727	75
581	2.764176	2.764251	2.764326	2.764400	2.764475	75
582	2.764923	2.764998	2.765072	2.765147	2.765221	75
583	2.765669	2.765743	2.765818	2.765892	2.765966	74
584	2.766413	2.766487	2.766562	2.766636	2.766710	74
585	2.767156	2.767230	2.767304	2.767379	2.767453	74
586	2.767898	2.767972	2.768046	2.768120	2.768194	74
587	2.768638	2.768712	2.768786	2.768860	2.768934	74
588	2.769377	2.769451	2.769525	2.769599	2.769673	74
589	2.770115	2.770189	2.770263	2.770336	2.770410	74
590	2.770852	2.770926	2.770999	2.771073	2.771146	74
591	2.771587	2.771661	2.771734	2.771808	2.771881	73
592	2.772322	2.772395	2.772468	2.772542	2.772615	73
593	2.773055	2.773128	2.773201	2.773274	2.773348	73
594	2.773786	2.773860	2.773933	2.774006	2.774079	73
595	2.774517	2.774590	2.774663	2.774736	2.774809	73
596	2.775246	2.775319	2.775392	2.775465	2.775538	73
597	2.775974	2.776047	2.776120	2.776193	2.776265	73
598	2.776701	2.776774	2.776846	2.776919	2.776992	73
599	2.777427	2.777499	2.777572	2.777644	2.777717	72
600	2.778151	2.778224	2.778296	2.778368	2.778441	72
601	2.778874	2.778947	2.779019	2.779091	2.779163	72
602	2.779596	2.779669	2.779741	2.779813	2.779885	72
603	2.780317	2.780389	2.780461	2.780533	2.780605	72
604	2.781037	2.781109	2.781181	2.781253	2.781324	72
605	2.781755	2.781827	2.781899	2.781971	2.782042	72
606	2.782473	2.782544	2.782616	2.782688	2.782759	72
607	2.783189	2.783260	2.783332	2.783403	2.783475	71
608	2.783904	2.783975	2.784046	2.784118	2.784189	71
609	2.784617	2.784689	2.784760	2.784831	2.784902	71
610	2.785330	2.785401	2.785472	2.785543	2.785615	71
611	2.786041	2.786112	2.786183	2.786254	2.786325	71
612	2.786751	2.786822	2.786893	2.786964	2.787035	71
613	2.787460	2.787531	2.787602	2.787673	2.787744	71
614	2.788168	2.788239	2.788310	2.788381	2.788451	71
615	2.788875	2.788946	2.789016	2.789087	2.789157	71
Dif.	73	7	15	22	29	❀

N°	5	6	7	8	9	Dif.
573	2.758533	2 758609	2.758685	2.758761	2.758836	76
574	2.759290	2.759366	2.759441	2.759517	2.759592	76
575	2.760045	2.760121	2.760196	2.760272	2.760347	75
576	2.760799	2.760875	2.760950	2.761025	2.761101	75
577	2.761552	2.761627	2.761702	2.761778	2.761853	75
578	2.762303	2.762378	2.762453	2.762529	2.762604	75
579	2.763053	2.763128	2.763203	2.763278	2.763353	75
580	2.763802	2.763877	2.763952	2.764027	2.764101	75
581	2.764550	2.764624	2 764699	2.764774	2.764848	75
582	2.765296	2.765370	2.765445	2.765520	2.765594	75
583	2.766041	2.766115	2.766190	2.766264	2 766338	74
584	2 766785	2.766859	2.766933	2.767007	2.767082	74
585	2.767527	2.767601	2 767675	2.767749	2.767823	74
586	2.768268	2.768342	2.768416	2.768490	2.768564	74
587	2.769008	2.769082	2.769156	2.769230	2.769303	74
588	2.769746	2.769820	2.769894	2.769968	2.770042	74
589	2.770484	2 770557	2.770631	2.770705	2.770778	74
590	2.771220	2.771293	2.771367	2.771440	2.771514	74
591	2.771955	2.772028	2.772102	2.772175	2.772248	73
592	2.772688	2.772762	2.772835	2.772908	2.772981	73
593	2.773421	2.773494	2.773567	2.773640	2.773713	73
594	2.774152	2.774225	2.774298	2.774371	2.774444	73
595	2.774882	2.774955	2.775028	2.775100	2.775173	73
596	2.775610	2.775683	2.775756	2.775829	2.775902	73
597	2.776338	2.776411	2.776483	2.776556	2,776629	73
598	2.777064	2.777137	2.777209	2.777282	2.777354	73
599	2.777789	2.777862	2.777934	2.778006	2.778879	72
600	2.778513	2.778585	2.778658	2.778730	2.778002	72
601	2.779236	2.779308	2.779380	2.779452	2.779524	72
602	2.779957	2.780029	2.780101	2.780173	2 780245	72
603	2.780677	2.780749	2.780821	2.780893	2.780965	72
604	2.781396	2.781468	2.781540	2.781612	2.781684	72
605	2.782114	2.782186	2.782258	2.782329	2.782401	72
606	2.782831	2.782902	2.782974	2.783046	2.783117	72
607	2.783546	2.783618	2.783689	2.783761	2.783832	71
608	2.784261	2.784332	2.784403	2.784475	2.784546	71
609	2.784974	2.785045	2.7851:6	2.785187	2.785259	71
610	2.785686	2.785757	2.785828	2.785899	2.785970	71
611	2.786396	2.786467	2.786538	2.786609	2.786680	71
612	2.787106	2.787177	2.787248	2.787319	2.787390	71
613	2.787815	2.787885	2.787956	2.788027	2.788098	71
614	2.788522	2.788593	2.788663	2.788734	2.788804	71
615	2.789228	2.789299	2.789369	2.789440	2.789510	71
❁	36	44	51	58	66	Pts.

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif
616	2.789581	2.789651	2.789722	2.789792	2.789863	70
617	2.790285	2.790356	2.790426	2.790496	2.790567	70
618	2.790988	2.791059	2.791129	2.791199	2.791269	70
619	2.791691	2.791761	2.791831	2.791901	2.791971	70
620	2.792392	2.792462	2.792532	2.792602	2.792672	70
621	2.793092	2.793162	2.793231	2.793301	2.793371	70
622	2.793790	2.793860	2.793930	2.794000	2.794070	70
623	2.794488	2.794558	2.794627	2.794697	2.794767	70
624	2.795185	2.795254	2.795324	2.795393	2.795463	69
625	2.795880	2.795949	2.796019	2.796088	2.796158	69
626	2.796574	2.796644	2.796713	2.796782	2.796852	69
627	2.797268	2.797337	2.797406	2.797475	2.797545	69
628	2.797960	2.798029	2.798098	2.798167	2.798236	69
629	2.798651	2.798720	2.798789	2.798858	2.798927	69
630	2.799341	2.799409	2.799478	2.799547	2.799616	69
631	2.800029	2.800098	2.800167	2.800236	2.800305	69
632	2.800717	2.800786	2.800854	2.800923	2.800992	69
633	2.801404	2.801472	2.801541	2.801609	2.801678	69
634	2.802089	2.802158	2.802226	2.802295	2.802363	68
635	2.802774	2.802842	2.802910	2.802979	2.803047	68
636	2.803457	2.803525	2.803594	2.803662	2.803730	68
637	2.804139	2.804208	2.804276	2.804344	2.804412	68
638	2.804821	2.804889	2.804957	2.805025	2.805093	68
639	2.805501	2.805569	2.805637	2.805705	2.805773	68
640	2.806180	2.806248	2.806316	2.806384	2.806451	68
641	2.806858	2.806926	2.806994	2.807061	2.807129	68
642	2.807535	2.807603	2.807670	2.807738	2.807806	68
643	2.808211	2.808279	2.808346	2.808414	2.808481	67
644	2.808886	2.808953	2.809021	2.809088	2.809156	67
645	2.809560	2.809627	2.809694	2.809762	2.809829	67
646	2.810233	2.810300	2.810367	2.810434	2.810501	67
647	2.810904	2.810971	2.811039	2.811106	2.811173	67
648	2.811575	2.811642	2.811709	2.811776	2.811843	67
649	2.812245	2.812312	2.812379	2.812445	2.812512	67
650	2.812913	2.812980	2.813047	2.813114	2.813181	67
651	2.813582	2.813648	2.813714	2.813781	2.813848	67
652	2.814248	2.814314	2.814381	2.814447	2.814514	67
653	2.814913	2.814980	2.815046	2.815113	2.815179	66
654	2.815578	2.815644	2.815711	2.815777	2.815843	66
655	2.816241	2.816308	2.816374	2.816440	2.816506	66
656	2.816904	2.816970	2.817036	2.817102	2.817169	66
657	2.817565	2.817631	2.817698	2.817764	2.817830	66
658	2.818226	2.818292	2.818358	2.818424	2.818490	66
Dif.	68	7	14	20	27	

N°	5	6	7	8	9	Dif.
616	2.789933	2.790004	2.790074	2.790144	2.790215	70
617	2.790637	2.790707	2.790778	2.790848	2.790918	70
618	2.791340	2.791410	2.791480	2.791550	2 791620	70
619	2.792041	2.792111	2.792181	2.792252	2.792322	70
620	2.792742	2.792812	2.792882	2.792952	2.793022	70
621	2.793441	2.793511	2.793581	2.793651	2.793721	70
622	2.794139	2.794209	2.794279	2.794349	2.794418	70
623	2.794836	2.794906	2.794976	2.795045	2.795115	70
624	2.795532	2.795602	2.795672	2.795741	2.795811	69
625	2.796227	2.796297	2.796366	2.796436	2.796505	69
626	2.796921	2.796990	2.797060	2.797129	2.797198	69
627	2.797614	2.797683	2.797752	2.797821	2.797890	69
628	2.798305	2.798374	2.798443	2.798513	2.798582	69
629	2.798996	2.799065	2.799134	2.799203	2.799272	69
630	2.799685	2.799754	2.799823	2.799892	2.799961	69
631	2.800373	2.800442	2.800511	2.800580	2.800648	69
632	2.801061	2.801129	2.801198	2.801266	2.801335	69
633	2.801747	2.801815	2.801884	2.801952	2.802021	69
634	2.802432	2.802500	2.802568	2.802637	2.802705	68
635	2.803116	2.803184	2.803252	2.803321	2.803389	68
636	2.803798	2.803867	2.803935	2.804003	2.804071	68
637	2.804480	2.804548	2.804616	2.804685	2.804753	68
638	2.805161	2.805229	2.805297	2.805365	2.805433	68
639	2.805841	2.805908	2.805976	2.806044	2.806112	68
640	2.806519	2.806587	2.806655	2.806723	2.806790	68
641	2.807197	2.807264	2.807332	2.807400	2.807467	68
642	2.807873	2.807941	2.808008	2.808076	2.808143	68
643	2.808549	2.808616	2.808684	2.808751	2.808818	67
644	2.809223	2.809290	2.809358	2.809425	2.809492	67
645	2.809896	2.809964	2.810031	2.810098	2.810165	67
646	2.810569	2.810636	2.810703	2.810770	2.810837	67
647	2.811240	2.811307	2.811374	2.811441	2.811508	67
648	2.811910	2.811977	2.812044	2.812111	2.812178	67
649	2.812579	2.812646	2.812713	2.812780	2.812847	67
650	2.813247	2.813314	2.813381	2.813448	2.813514	67
651	2.813914	2.813981	2.814048	2.814114	2.814181	67
652	2.814581	2.814647	2.814714	2.814780	2.814847	67
653	2.815246	2.815312	2.815378	2.815445	2.815511	66
654	2.815910	2.815976	2.816042	2.816109	2.816175	66
655	2.816573	2.816639	2.816705	2.816771	2.816838	66
656	2.817235	2.817301	2.817367	2.817433	2.817499	66
657	2 817896	2.817962	2.818028	2.818094	2.818160	66
658	2.818556	2.818622	2.818688	2.818754	2.818820	66
	34	41	48	54	61	Pts

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif
659	2.818885	2.818951	2.819017	2.819083	2.819149	66
660	2.819544	2.819610	2.819676	2.819741	2.819807	66
661	2.820201	2.820267	2.820333	2.820399	2.820464	66
662	2.820858	2.820924	2.820989	2.821055	2.821120	66
663	2.821514	2.821579	2.821645	2.821710	2.821775	65
664	2.822168	2.822233	2.822299	2.822364	2.822430	65
665	2.822822	2.822887	2.822952	2.823018	2.823083	65
666	2.823474	2.823539	2.823605	2.823670	2.823735	65
667	2.824126	2.824191	2.824256	2.824321	2.824386	65
668	2.824776	2.824841	2.824906	2.824971	2.825036	65
669	2.825426	2.825491	2.825556	2.825621	2.825686	65
670	2.826075	2.826140	2.826204	2.826269	2.826334	65
671	2.826723	2.826787	2.826852	2.826917	2.826981	65
672	2.827369	2.827434	2.827499	2.827563	2.827628	65
673	2.828015	2.828080	2.828144	2.828209	2.828273	64
674	2.828660	2.828724	2.828789	2.828853	2.828918	64
675	2.829304	2.829368	2.829432	2.829497	2.829561	64
676	2.829947	2.830011	2.830075	2.830139	2.830204	64
677	2.830589	2.830653	2.830717	2.830781	2.830845	64
678	2.831230	2.831294	2.831358	2.831422	2.831486	64
679	2.831870	2.831934	2.831998	2.832062	2.832126	64
680	2.832509	2.832573	2.832637	2.832700	2.832764	64
681	2.833147	2.833211	2.833275	2.833338	2.833402	64
682	2.833784	2.833848	2.833912	2.833975	2.834039	64
683	2.834421	2.834484	2.834548	2.834611	2.834675	64
684	2.835056	2.835120	2.835183	2.835247	2.835310	63
685	2.835691	2.835754	2.835817	2.835881	2.835944	63
686	2.836324	2.836387	2.836451	2.836514	2.836577	63
687	2.836957	2.837020	2.837083	2.837146	2.837210	63
688	2.837588	2.837652	2.837715	2.837778	2.837841	63
689	2.838219	2.838282	2.838345	2.838408	2.838471	63
690	2.838849	2.838912	2.838975	2.839038	2.839101	63
691	2.839478	2.839541	2.839604	2.839667	2.839729	63
692	2.840106	2.840169	2.840232	2.840294	2.840357	63
693	2.840733	2.840796	2.840859	2.840921	2.840984	63
694	2.841359	2.841422	2.841485	2.841547	2.841610	63
695	2.841985	2.842047	2.842110	2.842172	2.842235	62
696	2.842609	2.842672	2.842734	2.842796	2.842859	62
697	2.843233	2.843295	2.843357	2.843420	2.843482	62
698	2.843855	2.843918	2.843980	2.844042	2.844104	62
699	2.844477	2.844539	2.844601	2.844664	2.844726	62
700	2.845098	2.845160	2.845222	2.845284	2.845346	62
701	2.845718	2.845780	2.845842	2.845904	2.845966	62
Dif.	64	6	13	19	26	

N°	5	6	7	8	9	Dif.
659	2.819215	2.819281	2.819346	2.819412	2.819478	66
660	2.819873	2.819939	2.820004	2.820070	2.820136	66
661	2.820530	2.820595	2.820661	2 820727	2.820792	66
662	2.821186	2.821251	2.821317	2.821382	2 821448	66
663	2.821841	2.821906	2.821972	2.822037	2.822103	65
664	2.822495	2.822560	2.822626	2.822691	2.822756	65
665	2.823148	2.823213	2.823279	2.823344	2.823409	65
666	2.823800	2.823865	2.823930	2.823996	2.824061	65
667	2.824451	2.824516	2.824581	2.824646	2.824711	65
668	2.825101	2.825166	2.825231	2.825296	2.825361	65
669	2.825751	2.825815	2.825880	2.825945	2.826010	65
670	2.826399	2.826464	2.826528	2.826593	2.826658	65
671	2.827046	2.827111	2.827175	2.827240	2.827305	65
672	2.827692	2.827757	2.827821	2.827886	2.827951	65
673	2.828338	2.828402	2 828467	2 828531	2.828595	64
674	2.828982	2.829046	2.829111	2.829175	2.829239	64
675	2.829625	2.829690	2.829754	2.829818	2.829882	64
676	2.830268	2.830332	2.830396	2.830460	2.830525	64
677	2.830909	2.830973	2.831037	2.831102	2.831166	64
678	2.831550	2.831614	2.831678	2.831742	2.831806	64
679	2.832189	2.832253	2.832317	2.832381	2.832445	64
680	2.832828	2.832892	2.832956	2.833020	2.833083	64
681	2.833466	2.833530	2.833593	2.833657	2.833721	64
682	2.834103	2,834166	2.834230	2.834294	2.834357	64
683	2.834739	2.834802	2.834866	2.834929	2.834993	64
684	2.835373	2.835437	2 835500	2.835564	2.835627	63
685	2.836007	2.836071	2.836134	2.836197	2.836261	63
686	2.836641	2.836704	2 836767	2.836830	2.836894	63
687	2.837273	2.837336	2.837399	2.837462	2.837525	63
688	2.837904	2.837967	2.838030	2.838093	2.838156	63
689	2.838534	2.838597	2.838660	2.838723	2.838786	63
690	2.839164	2.839227	2.839289	2.839352	2.839415	63
691	2.839792	2.839855	2.839918	2.839981	2.840043	63
692	2.840420	2.840482	2.840545	2.840608	2.840671	63
693	2.841046	2.841109	2.841172	2.841234	2.841297	63
694	2.841672	2.841735	2.841797	2.841860	2.841922	63
695	2.842297	2.842360	2.842422	2.842484	2.842547	62
696	2.842921	2.842983	2.843046	2.843108	2.843170	62
697	2.843544	2.843606	2.843669	2.843731	2.843793	62
698	2.844166	2.844229	2.844291	2.844353	2.844415	62
699	2.844788	2.844850	2.844912	2.844974	2.845036	62
700	2.845408	2.845470	2.845532	2.845594	2.845656	62
701	2.846028	2.846090	2.846151	2.846213	2.846275	62
⊙	32	38	45	51	58	Pts.

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
702	2.846337	2.846399	2.846461	2.846523	2.846585	62
703	2.846955	2.847017	2.847079	2.847141	2.847202	62
704	2.847573	2.847634	2.847696	2.847758	2.847819	62
705	2.848189	2.848251	2.848312	2.848374	2.848435	62
706	2.848805	2.848866	2.848928	2.848989	2.849051	61
707	2.849419	2.849481	2.849542	2.849604	2.849665	61
708	2.850033	2.850095	2.850156	2.850217	2.850279	61
709	2.850646	2.850707	2.850769	2.850830	2.850891	61
710	2.851258	2.851320	2.851381	2.851442	2.851503	61
711	2.851870	2.851931	2.851992	2.852053	2.852114	61
712	2.852480	2.852541	2.852602	2.852663	2.852724	61
713	2.853090	2.853150	2.853211	2.853272	2.853333	61
714	2.853698	2.853759	2.853820	2.853881	2.853941	61
715	2.854306	2.854367	2.854428	2.854488	2.854549	61
716	2.854913	2.854974	2.855034	2.855095	2.855156	61
717	2.855519	2.855580	2.855640	2.855701	2.855761	60
718	2.856124	2.856185	2.856245	2.856306	2.856365	60
719	2.856729	2.856789	2.856850	2.856910	2.856970	60
720	2.857332	2.857393	2.857453	2.857513	2.857574	60
721	2.857935	2.857995	2.858056	2.858116	2.858176	60
722	2.858537	2.858597	2.858657	2.858718	2.858778	60
723	2.859138	2.859198	2.859258	2.859318	2.859379	60
724	2.859739	2.859799	2.859859	2.859918	2.859978	60
725	2.860338	2.860398	2.860458	2.860518	2.860578	60
726	2.860937	2.860996	2.861056	2.861116	2.861176	60
727	2.861534	2.861594	2.861654	2.861714	2.861773	60
728	2.862131	2.862191	2.862251	2.862310	2.862370	60
729	2.862728	2.862787	2.862847	2.862906	2.862966	60
730	2.863323	2.863382	2.863442	2.863501	2.863561	59
731	2.863917	2.863977	2.864036	2.864096	2.864155	59
732	2.864511	2.864570	2.864630	2.864689	2.864748	59
733	2.865104	2.865163	2.865222	2.865282	2.865341	59
734	2.865696	2.865755	2.865814	2.865874	2.865933	59
735	2.866287	2.866346	2.866405	2.866465	2.866524	59
736	2.866878	2.866937	2.866996	2.867055	2.867114	59
737	2.867467	2.867526	2.867585	2.867644	2.867703	59
738	2.868056	2.868115	2.868174	2.868233	2.868292	59
739	2.868644	2.868703	2.868762	2.868821	2.868879	59
740	2.869232	2.869290	2.869349	2.869408	2.869466	59
741	2.869818	2.869877	2.869935	2.869994	2.870053	59
742	2.870404	2.870462	2.870521	2.870579	2.870638	58
743	2.870989	2.871047	2.871106	2.871164	2.871223	58
744	2.871573	2.871631	2.871690	2.871748	2.871806	58
Dif.	60	6	12	18	24	

N°	5	6	7	8	9	Dif.
702	2.846646	2.846708	2.846770	2.846832	2.846894	62
703	2.847264	2.847326	2.847388	2.847449	2.847511	62
704	2.847881	2.847943	2.848004	2.848066	2.848128	62
705	2.848497	2.848559	2.848620	2.848682	2.848743	62
706	2 849112	2.849174	2.849235	2.849297	2.849358	61
707	2.849726	2.849788	2.849849	2.849911	2.849972	61
708	2.850340	2.850401	2.850462	2.850524	2.850585	61
709	2.850952	2.851014	2.851075	2.851136	2.851197	61
710	2.851564	2.851625	2.851686	2.851747	2.851809	61
711	2.852175	2.852236	2.852297	2.852358	2.852419	61
712	2.852785	2.852846	2.852907	2.852968	2.853029	61
713	2.853394	2.853455	2.853516	2.853576	2.853637	61
714	2.854002	2.854063	2.854124	2.854185	2.854245	61
715	2.854610	2.854670	2.854731	2.854792	2.854852	61
716	2.855216	2.855277	2.855337	2.855398	2.855459	61
717	2.855822	2.855882	2.855943	2.856003	2.856064	60
718	2.856427	2.856487	2.856548	2.856608	2.856668	60
719	2.857031	2.857091	2.857151	2.857212	2.857272	60
720	2.857634	2.857694	2.857754	2.857815	2.857875	60
721	2.858236	2.858297	2.858357	2.858417	2.858477	60
722	2.858838	2.858898	2.858958	2.859018	2.859078	60
723	2.859439	2.859498	2.859559	2.859619	2.859679	60
724	2.860038	2 860098	2.860158	2.860218	2.860278	60
725	2.860637	2.860697	2.860757	2.860817	2.860877	60
726	2.861236	2.861295	2.861355	2.861415	2.861475	60
727	2.861833	2.861893	2.861952	2.862012	2.862072	60
728	2.862430	2.862489	2.862549	2.862608	2.862668	60
729	2.863025	2.863085	2.863144	2.863204	2.863263	60
730	2.863620	2.863680	2.863739	2.863798	2.863858	59
731	2.864214	2.864274	2.864333	2.864392	2.864452	59
732	2.864808	2.864867	2.864926	2.864985	2.865045	59
733	2.865400	2.865459	2.865518	2.865578	2.865637	59
734	2.865992	2.866051	2.866110	2.866169	2.866228	59
735	2.866583	2.866642	2.866701	2.866760	2.866819	59
736	2.867173	2.867232	2.867291	2.867350	2.867409	59
737	2.867762	2.867821	2.867880	2.867939	2.867998	59
738	2.868350	2.868409	2.868468	2.868527	2.868586	59
739	2.868938	2.868997	2.869056	2.869114	2.869173	59
740	2.869525	2.869584	2.869642	2.869701	2.869760	59
741	2.870111	2.870170	2.870228	2.870287	2.870345	59
742	2.870696	2.870755	2.870813	2.870872	2.870930	58
743	2.871281	2.871339	2.871398	2.871456	2.871515	58
744	2.871865	2.871923	2.871981	2.872040	2.872098	58
✿	30	36	42	48	64	Pts

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
745	2.872156	2.872215	2.872273	2.872331	2.872389	58
746	2.872739	2.872797	2.872855	2.872913	2.872972	58
747	2.873321	2.873379	2.873437	2.873495	2.873553	58
748	2.873902	2.873960	2.874018	2.874076	2.874134	58
749	2.874482	2.874540	2.874598	2.874656	2.874714	58
750	2.875061	2.875119	2.875177	2.875235	2.875293	58
751	2.875640	2.875698	2.875756	2.875813	2.875871	58
752	2.876218	2.876276	2.876333	2.876391	2.876449	58
753	2.876795	2.876853	2.876910	2.876968	2.877026	58
754	2.877371	2.877429	2.877487	2.877544	2.877602	58
755	2.877947	2.878004	2.878062	2.878119	2.878177	57
756	2.878522	2.878579	2.878637	2.878694	2.878752	57
757	2.879096	2.879153	2.879211	2.879268	2.879325	57
758	2.879669	2.879726	2.879784	2.879841	2.879898	57
759	2.880242	2.880299	2.880356	2.880413	2.880471	57
760	2.880814	2.880871	2.880928	2.880985	2.881042	57
761	2.881385	2.881442	2.881499	2.881556	2.881613	57
762	2.881955	2.882012	2.882069	2.882126	2.882183	57
763	2.882525	2.882581	2.882638	2.882695	2.882752	57
764	2.883093	2.883150	2.883207	2.883264	2.883321	57
765	2.883661	2.883718	2.883775	2.883832	2.883888	57
766	2.884229	2.884285	2.884342	2.884399	2.884455	57
767	2.884795	2.884852	2.884909	2.884965	2.885022	57
768	2.885361	2.885418	2.885474	2.885531	2.885587	57
769	2.885926	2.885983	2.886039	2.886096	2.886152	56
770	2.886491	2.886547	2.886604	2.886660	2.886716	56
771	2.887054	2.887111	2.887167	2.887223	2.887280	56
772	2.887617	2.887674	2.887730	2.887786	2.887842	56
773	2.888179	2.888236	2.888292	2.888348	2.888404	56
774	2.888741	2.888797	2.888853	2.888909	2.888965	56
775	2.889302	2.889358	2.889414	2.889470	2.889526	56
776	2.889862	2.889918	2.889974	2.890030	2.890086	56
777	2.890421	2.890477	2.890533	2.890589	2.890644	56
778	2.890980	2.891035	2.891091	2.891147	2.891203	56
779	2.891537	2.891593	2.891649	2.891705	2.891760	56
780	2.892095	2.892150	2.892206	2.892262	2.892317	56
781	2.892651	2.892707	2.892762	2.892818	2.892873	56
782	2.893207	2.893262	2.893318	2.893373	2.893429	56
783	2.893762	2.893817	2.893873	2.893928	2.893984	55
784	2.894316	2.894371	2.894427	2.894482	2.894538	55
785	2.894870	2.894925	2.894980	2.895036	2.895091	55
786	2.895423	2.895478	2.895533	2.895588	2.895644	55
787	2.895975	2.896030	2.896085	2.896140	2.896195	55
Dif	57	6	11	17	23	

N°	5	6	7	8	9	Dif.
745	2.872448	2.872506	2.872564	2.872622	2.872681	58
746	2.873030	2.873088	2.873146	2.873204	2.873262	58
747	2.873611	2.873669	2.873727	2.873785	2.873844	58
748	2.874192	2.874250	2.874308	2.874366	2.874424	58
749	2.874772	2.874830	2.874888	2.874945	2.875003	58
750	2.875351	2.875409	2.875466	2.875524	2.875582	58
751	2.875929	2.875987	2.876045	2.876102	2.876160	58
752	2.876507	2.876564	2.876622	2.876680	2.876737	58
753	2.877083	2.877141	2.877199	2.877256	2.877314	58
754	2.877659	2.877717	2.877774	2.877832	2.877889	58
755	2.878234	2.878292	2.878349	2.878407	2.878464	57
756	2.878809	2.878866	2.878924	2.878981	2.879039	57
757	2.879383	2.879440	2.879497	2.879555	2.879612	57
758	2.879956	2.880013	2.880070	2.880127	2.880185	57
759	2.880528	2.880585	2.880642	2.880699	2.880756	57
760	2.881099	2.881156	2.881213	2.881271	2.881328	57
761	2.881670	2.881727	2.881784	2.881841	2.881898	57
762	2.882240	2.882297	2.882354	2.882411	2.882468	57
763	2.882809	2.882866	2.882923	2.882980	2.883037	57
764	2.883377	2.883434	2.883491	2.883548	2.883605	57
765	2.883945	2.884002	2.884059	2.884115	2.884173	57
766	2.884512	2.884569	2.884625	2.884682	2.884739	57
767	2.885078	2.885135	2.885192	2.885248	2.885305	57
768	2.885644	2.885700	2.885757	2.885813	2.885870	57
769	2.886209	2.886265	2.886321	2.886378	2.886434	56
770	2.886773	2.886829	2.886885	2.886942	2.886998	56
771	2.887336	2.887392	2.887448	2.887505	2.887561	56
772	2.887898	2.887955	2.888011	2.888067	2.888123	56
773	2.888460	2.888516	2.888573	2.888629	2.888685	56
774	2.889021	2.889077	2.889134	2.889190	2.889246	56
775	2.889582	2.889638	2.889694	2.889750	2.889806	56
776	2.890141	2.890197	2.890253	2.890309	2.890365	56
777	2.890700	2.890756	2.890812	2.890868	2.890924	56
778	2.891259	2.891314	2.891370	2.891426	2.891482	56
779	2.891816	2.891872	2.891928	2.891983	2.892039	56
780	2.892373	2.892429	2.892484	2.892540	2.892595	56
781	2.892929	2.892985	2.893040	2.893096	2.893151	56
782	2.893484	2.893540	2.893595	2.893651	2.893706	56
783	2.894039	2.894094	2.894150	2.894205	2.894261	55
784	2.894593	2.894648	2.894704	2.894759	2.894814	55
785	2.895146	2.895201	2.895257	2.895312	2.895367	55
786	2.895699	2.895754	2.895809	2.895864	2.895920	55
787	2.896251	2.896306	2.896361	2.896416	2.896471	55
	28	34	40	46	51	

A TABLE OF LOGARITHMS,

N°	0	1	2	3	4	Dif.
788	2.896526	2 896582	2.896636	2.896692	2.896747	55
789	2.897077	2.897132	2 897187	2.897242	2.897297	55
790	2.897627	2.897682	2.897737	2.897792	2.897847	55
791	2.898176	2.898231	2.898286	2.898341	2.898396	55
792	2.898725	2.898780	2.898835	2.898890	2.898944	55
793	2.899273	2.899328	2.899383	2.899437	2.899492	55
794	2.899821	2.899875	2.899930	2.899985	2.900039	55
795	2.900367	2.900422	2.900476	2.900531	2.900586	55
796	2.900913	2.900968	2 901022	2.901077	2.901131	55
797	2.901458	2 901513	2.901567	2.901622	2.901676	54
798	2.902003	2.902057	2.902112	2.902166	2 902221	54
799	2.902547	2.902601	2.902655	2.902710	2.902764	54
800	2.903090	2.903144	2 903198	2.903253	2.903307	54
801	2.903632	2.903687	2.903741	2.903795	2.903849	54
802	2.904174	2.904228	2.904283	2.904337	2.904391	54
803	2.904715	2.904770	2.904824	2.904878	2.904932	54
804	2.905256	2.905310	2.905364	2.905418	2.905472	54
805	2.905796	2.905850	2.905904	2.905958	2.906012	54
806	2.906335	2.906389	2.906443	2.906497	2.906550	54
807	2.906873	2.906927	2.906981	2.907035	2 907089	54
808	2.907411	2.907465	2.907519	2.907573	2.907626	54
809	2.907948	2 908002	2.908056	2.908109	2.908163	54
810	2.908485	2 908539	2.908592	2.908646	2.908699	54
811	2.909021	2.909074	2.909128	2.909181	2.909235	53
812	2 909556	2.909609	2.909663	2.909716	2.909770	53
813	2.910090	2.910144	2.910197	2.910251	2.910304	53
814	2.910624	2.910678	2.910731	2.910784	2.910838	53
815	2.911158	2 911211	2.911264	2.911317	2.911371	53
816	2.911690	2.911743	2.911797	2.911850	2.911903	53
817	2.912222	2.912275	2.912328	2.912381	2 912435	53
818	2.912753	2.912806	2.912859	2.912913	2.912966	53
819	2.913284	2.913337	2.913390	2.913443	2.913496	53
820	2.913814	2.913867	2 913920	2.913973	2.914026	53
821	2.914343	2 914396	2.914448	2.914502	2.914555	53
822	2.914872	2.914925	2.914977	2.915030	2.915083	53
823	2.915400	2.915453	2.915505	2.915558	2 915611	53
824	2.915927	2.915980	2.916033	2.916085	2.916138	53
825	2.916454	2.916507	2.916559	2.916612	2.916664	53
826	2.916980	2.917033	2.917085	2.917138	2.917190	53
827	2.917505	2.917558	2.917610	2.917663	2.917715	53
828	2 918030	2.918083	2.918135	2.918188	2.918240	52
829	2.918555	2.918607	2.918659	2.918712	2.918765	52
830	2.919078	2.919130	2.919183	2 919235	2 919287	52
Dif.	54	5	11	16	22	

N°	5	6	7	8	9	Dif.
788	2.896802	2.896857	2.896912	2.896967	2.897022	55
789	2.897352	2.897407	2.897462	2.897517	2.897572	55
790	2.897902	2.897957	2.898012	2 898667	2.898122	55
791	2.898451	2.898506	2.898561	2.898615	2 898670	55
792	2.898999	2.899054	2.899109	2.899164	2.899218	55
793	2 899547	2.899602	2.899656	2.899711	2.899766	55
794	2.900094	2.900149	2.900203	2.900258	2.900312	55
795	2.900640	2.900695	2.900749	2.900804	2.900859	55
796	2.901186	2.901240	2.901295	2.901349	2.901404	55
797	2.901731	2.901785	2.901840	2.901894	2.901948	54
798	2.902275	2.902329	2.902384	2.902438	2.902492	54
799	2.902818	2.902873	2.902927	2.902981	2.903036	54
800	2.903361	2.903416	2.903470	2.903524	2.903578	54
801	2.903903	2.903958	2.904012	2.904066	2.904120	54
802	2.904445	2.904499	2 904553	2 904607	2.904661	54
803	2.904986	2.905040	2.905094	2.905148	2.905202	54
804	2.905526	2.905580	2.905634	2.905688	2.905742	54
805	2.906065	2.906119	2.906173	2.906227	2 906281	54
806	2.906604	2.906658	2 906712	2.906766	2.906820	54
807	2.907142	2.907196	2.907250	2.907304	2.907358	54
808	2.907680	2.907734	2.907787	2.907841	2.907895	54
809	2.908217	2.908270	2.908324	2.908378	2.908431	54
810	2.908752	2.908807	2.908860	2.908914	2.908967	54
811	2.909288	2,909342	2.909395	2.909449	2.909502	54
812	2.909823	2.909877	2.909930	2.909984	2.910037	53
813	2.910358	2.910411	2 910464	2.910518	2.910571	53
814	2.910891	2.910944	2.910998	2.911051	2.911104	53
815	2.911424	2.911477	2 911530	2.911584	2.911637	53
816	2.911956	2.912009	2.912063	2.912116	2.912169	53
817	2.912488	2.912541	2.912594	2.912647	2.912700	53
818	2.913019	2.913072	2.913125	2.913178	2.913231	53
819	2.913549	2.913602	2.913655	2 913708	2.913761	53
820	2.914079	2.914131	2.914184	2.914237	2.914290	53
821	2.914608	2.914660	2.914713	2.914766	2.914819	53
822	2.915136	2.915189	2.915241	2.915294	2.915347	53
823	2.915664	2.915716	2.915769	2.915822	2.915874	53
824	2.916191	2.916243	2.916296	2.916349	2.916401	53
825	2.916717	2.916770	2.916822	2 916875	2.916927	53
826	2.917243	2.917295	2.917348	2.917400	2.917453	53
827	2.917768	2.917820	2.917873	2.917925	2.917978	52
828	2.918292	2.918345	2.918397	2.918450	2.918502	52
829	2.918816	2.918869	2.918921	2.918973	2.919026	52
830	2.919340	2.919392	2.919444	2.919496	2.919549	52
❁	27	32	38	43	49	Pts.

A TABLE of LOGARITHMS,

No	0	1	2	3	4	Dif.
831	2.919601	2.919653	2.919705	2.919758	2.919810	52
832	2.920123	2.920175	2.920228	2.920280	2.920332	52
833	2.920645	2.920697	2.920749	2.920801	2.920853	52
834	2.921166	2.9212 8	2.921270	2.921322	2.921374	52
835	2.921686	2.921738	2.921790	2.921842	2.921894	52
836	2.922206	2.922258	2.922310	2.922362	2.922414	52
837	2.922725	2.922777	2.922829	2.922881	2.922933	52
838	2.923244	2.923296	2.923348	2.923399	2.923451	52
839	2.923762	2.923814	2.923865	2.923917	2.923969	52
840	2.924279	2.924331	2.924383	2.924434	2.924486	52
841	2.924796	2.924848	2.924899	2.924951	2.925002	52
842	2.925312	2.925364	2.925415	2.925467	2.925518	52
843	2.925828	2.925879	2.925931	2.925982	2.926034	51
844	2.926342	2.626394	2.926445	2.926497	2 926548	51
845	2.926857	2.926908	2.926959	2.927011	2.927062	51
846	2.927370	2.927422	2.927473	2.927524	2.927576	51
847	2.927883	2.927935	2.927986	2.928037	2.928088	51
848	2.928396	2.928447	2.928498	2.928549	2.928601	51
849	2.928908	2.928959	2.929010	2.929061	2.929112	51
850	2.929419	2.929470	2.929521	2.929572	2 929623	51
851	2.929930	2.929981	2.930032	2.970083	2.930134	51
852	2.930440	2.930491	2.930541	2.930592	2.930643	51
853	2.930949	2.931000	2.931051	2.931102	2.931153	51
854	2.931458	2.931509	2.931560	2.931610	2.931661	51
855	2.931966	2.932017	2.932068	2.932118	2.932169	51
856	2.932474	2.932524	2.932575	2.932626	2.932677	51
857	2.932981	2.933031	2.933082	2.933133	2.933183	51
858	2.933487	2.933538	2.933588	2.933639	2.933690	51
859	2.933993	2.934044	2.934094	2.934145	2.934195	51
860	2.934498	2.934549	2.934599	2.934650	2 924700	50
861	2.935003	2.935034	2.935104	2.935154	2.935205	50
862	2.935507	2.935558	2.935608	2.935658	2.935709	50
863	2.936011	2.936061	2.936111	2.936162	2.936212	50
864	2.936514	2.936564	2.936614	2.936664	2.936715	50
865	2.937016	2.937066	2.937116	2.937167	2.937217	50
866	2.937518	2.937568	2.937618	2.937668	2.937718	50
867	2.938019	2.938069	2.938119	2.938169	2 938219	50
868	2.938520	2.938570	2.938620	2.938670	2.938720	50
869	2.939020	2.939070	2.939120	2.939170	2.939220	50
870	2.939519	2.939569	2.939619	2.939669	2.939719	50
871	2.940018	2.940068	2.940118	2.940168	2 940218	50
872	2.940516	2.940566	2.940616	2.940666	2.940716	50
873	2.941014	2.941064	2.941114	2.941163	2.941213	50
Dif.	51	5	10	15	20	

N°	5	6	7	8	9	Dif.
831	2.919862	2.919914	2.919967	2.920019	2.920071	52
832	2.920384	2.920436	2.920489	2.920541	2.920593	52
833	2.920906	2.920958	2.921010	2.921062	2.921114	52
834	2.921426	2.921478	2.921530	2.921582	2.921634	52
835	2.921946	2.921998	2.922050	2.922102	2.922154	52
836	2.922466	2.922518	2.922570	2.922622	2.922674	52
837	2.922985	2.923037	2.923088	2.923140	2.923192	52
838	2.923503	2.923555	2.923607	2.923658	2.923710	52
839	2.924021	2.924072	2.924124	2.924176	2.924228	52
840	2.924538	2.924589	2.924641	2.924693	2.924744	52
841	2.925054	2.925106	2.925157	2.925209	2.925260	52
842	2.925570	2.925621	2.925673	2.925724	2.925776	52
843	2.926085	2.926137	2.926188	2.926239	2.926291	52
844	2.926600	2.926651	2.926702	2.926754	2.926805	51
845	2.927114	2.927165	2.927216	2.927268	2.927319	51
846	2.927627	2.927678	2.927730	2.927781	2.927832	51
847	2.928140	2.928191	2.928242	2.928293	2.928345	51
848	2.928652	2.928703	2.928754	2.928805	2.928856	51
849	2.929163	2.929214	2.929266	2.929317	2.929368	51
850	2.929674	2.929725	2.929776	2.929827	2.929878	51
851	2.930185	2.930236	2.930287	2.930338	2.930389	51
852	2.930694	2.930745	2.930796	2.930847	2.930898	51
853	2.931203	2.931254	2.931305	2.931356	2.931407	51
854	2.931712	2.931763	2.931814	2.931864	2.931915	51
855	2.932220	2.932271	2.932321	2.932372	2.932423	51
856	2.932727	2.932778	2.932829	2.932879	2.932930	51
857	2.933234	2.933285	2.933335	2.933386	2.933437	51
858	2.933740	2.933791	2.933841	2.923892	2.933943	51
859	2.934246	2.934296	2.934347	2.934397	2.934448	51
860	2.934751	2.934801	2.934852	2.934902	2.934953	50
861	2.935255	2.935306	2.935356	2.935406	2.935457	50
862	2.935759	2.935809	2.935860	2.935910	2.935960	50
863	2.936262	2.936313	2.936363	2.936413	2.936463	50
864	2.936765	2.936815	2.936865	2.936916	2.936966	50
865	2.937267	2.937317	2.937367	2.937418	2.937468	50
866	2.937769	2.937819	2.937869	2.937919	2.937969	50
867	2.938269	2.938319	2.938370	2.938420	2.938470	50
868	2.938770	2.938820	2.938870	2.938920	2.938970	50
869	2.939270	2.939319	2.939369	2.939419	2.939469	50
870	2.939769	2.939819	2.939868	2.939918	2.939968	50
871	2.940267	2.940317	2.940367	2.940417	2.940467	50
872	2.940765	2.940815	2.940865	2.940915	2.940965	50
873	2.941263	2.941313	2.941362	2.941412	2.941462	50
⊛	25	31	36	41	46	Pts

A TABLE of LOGARITHMS,

No	0	1	2	3	4	Dif.
874	2.941511	2.941561	2.941611	2.941660	2.941710	49
875	2.942008	2.942058	2.942107	2.942157	2.942206	49
876	2.942504	2.942554	2.942603	2.942653	2.942702	49
877	2.943000	2.943049	2.943099	2.943148	2.943198	49
878	2.943494	2.943544	2.943593	2.943643	2.943692	49
879	2.943989	2.944038	2.944088	2.944137	2.944186	49
880	2.944482	2.944532	2.944581	2.944631	2.944680	49
881	2.944976	2.945025	2.945074	2.945124	2.945173	49
882	2.945469	2.945518	2.945567	2.945616	2.945665	49
883	2.945961	2.946010	2.946059	2.946108	2.946157	49
884	2.946452	2.946501	2.946550	2.946600	2.946649	49
885	2.946943	2.946992	2.947041	2.947090	2.947139	49
886	2.947434	2.947483	2.947532	2.947581	2.947630	49
887	2.947924	2.947973	2.948021	2.948070	2.948119	49
888	2.948413	2.948462	2.948511	2.948560	2.948608	49
889	2.948902	2.948951	2.948999	2.949048	2.949097	49
890	2.949390	2.949439	2.949488	2.949536	2.949585	49
891	2.949878	2.949926	2.949975	2.950024	2.950073	49
892	2.950365	2.950413	2.950462	2.950511	2.950560	49
893	2.950851	2.950900	2.950949	2.950997	2.951046	49
894	2.951337	2.951386	2.951435	2.951483	2.951532	49
895	2.951823	2.951872	2.951920	2.951969	2.952017	48
896	2.952308	2.952356	2.952405	2.952453	2.952502	48
897	2.952792	2.952841	2.952889	2.952938	2.952986	48
898	2.953276	2.953325	2.953373	2.953421	2.953470	48
899	2.953760	2.953808	2.953856	2.953905	2.953953	48
900	2.954242	2.954291	2.954339	2.954387	2.954435	48
901	2.954725	2.954773	2.954821	2.954869	2.954918	48
902	2.955206	2.955255	2.955303	2.955351	2.955399	48
903	2.955688	2.955736	2.955784	2.955832	2.955880	48
904	2.956168	2.956216	2.956264	2.956312	2.956361	48
905	2.956649	2.956697	2.956745	2.956792	2.956840	48
906	2.957128	2.957176	2.957224	2.957272	2.957320	48
907	2.957607	2.957655	2.957703	2.957751	2.957799	48
908	2.958086	2.958134	2.958181	2.958229	2.958277	48
909	2.958564	2.958612	2.958659	2.958707	2.958755	48
910	2.959041	2.959089	2.959137	2.959184	2.959232	48
911	2.959518	2.959566	2.959614	2.959661	2.959709	48
912	2.959995	2.960042	2.960090	2.960138	2.960185	48
913	2.960471	2.960518	2.960566	2.960613	2.960661	48
914	2.960946	2.960994	2.961041	2.961089	2.961136	47
915	2.961421	2.961468	2.961516	2.961563	2.961611	47
916	2.961895	2.961943	2.961990	2.962038	2.962085	47
Dif.	48	5	10	14	19	

N°	5	6	7	8	9	Dif.
874	2.941760	2.941809	2.941859	2.941909	2.941958	49
875	2.942256	2.942306	2.942355	2.942405	2.942454	49
876	2.942752	2.942801	2.942851	2.942900	2.942950	49
877	2.943247	2.943297	2.943346	2.943396	2.943445	49
878	2 943742	2.943791	2.943841	2.943890	2.943939	49
879	2.944236	2.944285	2.944335	2 944384	2.944433	49
880	2.944729	2.944779	2.944828	2.944877	2.944927	49
881	2.945222	2.945272	2.945321	2.945370	2.945419	49
882	2.945715	2.945764	2.945813	2.945862	2.945911	49
883	2.946207	2.946256	2.946305	2.946354	2.946403	49
884	2.946698	2.946747	2.946796	2.946845	2.946894	49
885	2.947189	2.947238	2.947287	2.947336	2.947385	49
886	2.947679	2.947728	2.947777	2.947826	2.947875	49
887	2.948168	2.948217	2.948266	2.948315	2.948364	49
888	2.948657	2.948706	2.948755	2.948804	2 948853	49
889	2.949146	2.949195	2.949244	2.949292	2.949341	49
890	2.949634	2.949683	2.949731	2.949780	2.949829	49
891	2.950121	2.950170	2.950219	2.950267	2.950316	49
892	2.950608	2.950657	2.950705	2.950754	2.950803	49
893	2.951095	2.951143	2.951192	2.951240	2.951289	49
894	2.951580	2.951629	2.951677	2.951726	2.951774	49
895	2.952066	2.952114	2.952163	2.952211	2.952259	48
896	2.952550	2 952599	2.952647	2.952696	2.952744	48
897	2.953034	2.953083	2.953131	2.953180	2.953228	48
898	2.953518	2.953566	2.953615	2.953663	2.953711	48
899	2.954001	2.954049	2.954098	2.954146	2.954194	48
900	2.954484	2.954532	2.954580	2.954628	2.954677	48
901	2.954966	2.955014	2.955062	2.955110	2.955158	48
902	2.955447	2.955495	2.955543	2.955592	2.955640	48
903	2.955928	2.955976	2.956024	2.956072	2.956120	48
904	2.956409	2.956457	2.956505	2.956553	2.956601	48
905	2.956888	2.956936	2.956984	2.957032	2.957080	48
906	2.957368	2.957416	2.957464	2,957511	2.957559	48
907	2.957847	2.957894	2.957942	2.957990	2.958038	48
908	2.958325	2.958373	2.958420	2.958468	2.958516	48
909	2.958803	2.958850	2.958898	2.958946	2.958994	48
910	2.959280	2.959328	2.959375	2.959423	2.959471	48
911	2.959757	2.959804	2.959852	2.959900	2.959947	48
912	2.960233	2.960281	2.960328	2.960376	2.960423	48
913	2.960709	2.960756	2.960804	2.960851	2.960899	48
914	2.961184	2.961231	2.961279	2.961326	2.961374	47
915	2.961658	2.961706	2.961753	2.961801	2.961848	47
916	2.962132	2.962180	2.962227	2.962275	2.962322	47
❁	24	29	34	38	43	Pts

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
917	2.962369	2.962417	2.962464	2.962511	2.962559	47
918	2.962843	2.962890	2.962937	2.962985	2.963032	47
919	2.963315	2.963363	2.963410	2.963457	2.963504	47
920	2.963788	2.963835	2.963882	2.963929	2.963977	47
921	2.964260	2.964307	2.964355	2.964401	2.964448	47
922	2.964731	2.964778	2.964826	2.964872	2.964919	47
923	2.965202	2.965249	2.965296	2.965343	2.965390	47
924	2.965672	2.965719	2.965766	2.965813	2.965860	47
925	2.966142	2.966189	2.966236	2.966283	2.966329	47
926	2.966611	2.966658	2.966705	2.966752	2.966798	47
927	2.967080	2.967127	2.967173	2.967220	2.967267	47
928	2.967548	2.967595	2.967642	2.967688	2.967735	47
929	2.968016	2.968062	2.968109	2.968156	2.968203	47
930	2.968483	2.968530	2.968576	2.968623	2.968670	47
931	2.968950	2.968996	2.969043	2.969090	2.969136	47
932	2.969416	2.969462	2.969509	2.969556	2.969602	47
933	2.969882	2.969928	2.969975	2.970021	2.970068	47
934	2.970347	2.970393	2.970440	2.970486	2.970533	46
935	2.970812	2.970858	2.970904	2.970951	2.970997	46
936	2.971276	2.971322	2.971369	2.971415	2.971461	46
937	2.971740	2.971786	2.971832	2.971879	2.971925	46
938	2.972203	2.972249	2.972295	2.972342	2.972388	46
939	2.972666	2.972712	2.972758	2.972804	2.972851	46
940	2.973128	2.973174	2.973220	2.973266	2.973313	46
941	2.973590	2.973636	2.973682	2.973728	2.973774	46
942	2.974051	2.974097	2.974143	2.974189	2.974235	46
943	2.974512	2.974558	2.974604	2.974650	2.974696	46
944	2.974972	2.975018	2.975064	2.975110	2.975156	46
945	2.975432	2.975478	2.975524	2.975570	2.975616	46
946	2.975891	2.975937	2.975983	2.976029	2.976075	46
947	2.976350	2.976396	2.976442	2.976487	2.976533	46
948	2.976808	2.976854	2.976900	2.976946	2.976991	46
949	2.977266	2.977312	2.977358	2.977403	2.977449	46
950	2.977724	2.977769	2.977815	2.977861	2.977906	46
951	2.978180	2.978226	2.978272	2.978317	2.978363	46
952	2.978637	2.978682	2.978728	2.978774	2.978819	46
953	2.979093	2.979138	2.979184	2.979230	2.979275	46
954	2.979548	2.979594	2.979639	2.979685	2.979730	46
955	2.980003	2.980049	2.980094	2.970140	2.970185	45
956	2.980458	2.980503	2.980549	2.980594	2.980640	45
957	2.980912	2.980957	2.981003	2.981048	2.981093	45
958	2.981365	2.981411	2.981456	2.981501	2.981547	45
959	2.981819	2.981864	2.981909	2.981954	2.982000	45
Dif.	46	5	9	14	18	

N°	5	6	7	8	9	Dif.
917	2.962606	2.962653	2.962701	2.962748	2.962795	47
918	2.963079	2.963126	2.963174	2.963221	2.963268	47
919	2.963552	2.963599	2.963646	2.963693	2.963741	47
920	2.964024	2.964071	2.964118	2.964165	2.964212	47
921	2.964495	2.964542	2.964590	2.964637	2.964684	47
922	2.964966	2.965013	2.965060	2.965108	2.965155	47
923	2.965437	2.965484	2.965531	2 965578	2.965625	47
924	2.965907	2.965954	2.966001	2.966048	2.966095	47
925	2.966376	2.966423	2.966470	2.966517	2.966564	47
926	2.966845	2.966892	2.966939	2.966986	2.967033	47
927	2.967314	2.967361	2.967408	2.967454	2.967501	47
928	2.967782	2.967829	2.967875	2.967922	2.967969	47
929	2.968249	2.968296	2.968343	2.968389	2.968436	47
930	2.968716	2.968763	2.968810	2.968856	2.968903	47
931	2.969183	2.969229	2.969276	2.969323	2.969369	47
932	2.969649	2.969695	2.969742	2.969788	2.969835	47
933	2.970114	2.970161	2.970207	2.970254	2.970300	47
934	2.970579	2.970626	2.970672	2.970719	2.970765	47
935	2.971044	2.971090	2.971137	2.971183	2.971229	46
936	2.971508	2.971554	2.971600	2.971647	2.971693	46
937	2.971971	2.972018	2.972064	2.972110	2.972156	46
938	2.972434	2.972480	2.972527	2.972573	2.972619	46
939	2.972897	2.972943	2.972989	2.973035	2.973082	46
940	2.973359	2.973405	2.973451	2.973497	2.973543	46
941	2.973820	2.973866	2.973913	2.973959	2.974005	46
942	2.974281	2.974327	2.974373	2.974420	2.974466	46
943	2.974742	2.974788	2.974834	2.974880	2.974926	46
944	2.975202	2.975248	2.975294	2.975340	2.975386	46
945	2.975661	2.975707	2.975753	2.975799	2.975845	46
946	2.976121	2.976166	2.976212	2.976258	2.976304	46
947	2.976579	2.976625	2.976671	2.976717	2.976762	46
948	2.977037	2.977083	2.977129	2.977175	2.977220	46
949	2.977495	2.977541	2.977586	2.977632	2.977678	46
950	2.977952	2.977998	2.978043	2.978089	2.978135	46
951	2.978409	2.978454	2.978500	2.978546	2.978591	46
952	2.978865	2.978911	2.978956	2.979002	2.979047	46
953	2.979321	2.979366	2.979412	2.979457	2.979503	46
954	2.979776	2.979821	2.979867	2.979912	2.979958	46
955	2.980231	2.980276	2.980322	2.980367	2.980412	45
956	2.980685	2.980730	2.980776	2 980821	2.980867	45
957	2.981139	2.981184	2.981229	2.981275	2.981320	45
958	2.981592	2.981637	2.981683	2.981728	2.981773	45
959	2.982045	2.982090	2.982135	2.982181	2.982226	45
✿	23	28	32	37	41	✿

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif.
960	2.982271	2.982316	2.982362	2.982407	2.982452	45
961	2.982723	2.982769	2.982814	2.982859	2.982904	45
962	2.983175	2.983220	2.983265	2.983310	2.983356	45
963	2.983626	2.983671	2.983716	2.983762	2.983807	45
964	2.984077	2.984122	2.984167	2.984212	2.984257	45
965	2.984527	2.984572	2.984617	2.984662	2.984707	45
966	2.984977	2.985022	2.985067	2.985112	2.985157	45
967	2.985426	2.985471	2.985516	2.985561	2.985606	45
968	2.985875	2.985920	2.985965	2.986010	2.986055	45
969	2.986324	2.986369	2.986413	2.986458	2.986503	45
970	2.986772	2.986816	2.986861	2.986906	2.986951	45
971	2.987219	2.987264	2.987309	2.987353	2.987398	45
972	2.987666	2.987711	2.987756	2.987800	2.987845	45
973	2.988113	2.988157	2.988202	2.988247	2.988291	45
974	2.988559	2.988603	2.988648	2.988693	2.988737	45
975	2.989005	2.989049	2.989094	2.989138	2.989183	45
976	2.989450	2.989494	2.989539	2.989583	2.989628	44
977	2.989895	2.989939	2.989983	2.990028	2.990072	44
978	2.990339	2.990383	2.990428	2.990472	2.990516	44
979	2.990783	2.990827	2.990871	2.990916	2.990960	44
980	2.991226	2.991270	2.991315	2.991359	2.991403	44
981	2.991669	2.991713	2.991757	2.991802	2.991846	44
982	2.992111	2.992156	2.992200	2.992244	2.992288	44
983	2.992553	2.992598	2.992642	2.992686	2.992730	44
984	2.992995	2.993039	2.993083	2.993127	2.993172	44
985	2.993436	2.993480	2.993524	2.993568	2.993613	44
986	2.993877	2.993921	2.993965	2.994009	2.994053	44
987	2.994317	2.994361	2.994405	2.994449	2.994493	44
988	2.994757	2.994801	2.994845	2.994889	2.994933	44
989	2.995196	2.995240	2.995284	2.995328	2.995372	44
990	2.995634	2.995679	2.995723	2.995767	2.995811	44
991	2.996074	2.996117	2.996161	2.996205	2.996249	44
992	2.996512	2.996555	2.996599	2.996643	2.996687	44
993	2.996949	2.996993	2.997037	2.997080	2.997124	44
994	2.997386	2.997430	2.997474	2.997517	2.997561	44
995	2.997823	2.997867	2.997910	2.997954	2.997998	44
996	2.998259	2.998303	2.998346	2.998390	2.998434	44
997	2.998695	2.998739	2.998782	2.998826	2.998869	44
998	2.999130	2.999174	2.999218	2.999261	2.999305	44
999	2.999565	2.999609	2.999652	2.999696	2.999739	43
Dif.	44	4	9	13	18	❁

N°	5	6	7	8	9	Dif.
960	2.982497	2.982543	2.982588	2.982633	2.982678	45
961	2.982949	2.982994	2.983040	2.983085	2.983130	45
962	2.983401	2.983446	2.983491	2.983536	2.983581	45
963	2.983852	2.983897	2.983942	2.983987	2.984032	45
964	2.984302	2.984347	2.984392	2.984437	2.984482	45
965	2.984752	2.984797	2.984842	2.984887	2.984932	45
966	2.985202	2.985247	2.985292	2.985337	2.985382	45
967	2.985651	2.985696	2.985741	2.985786	2.985830	45
968	2.986100	2.986144	2.986189	2.986234	2.986279	45
969	2.986548	2.986593	2.986637	2.986682	2.986727	45
970	2.986995	2.987040	2.987085	2.987130	2.987174	45
971	2.987443	2.987487	2.987532	2.987577	2.987622	45
972	2.987890	2.987934	2.987979	2.988024	2.988068	45
973	2.988336	2.988381	2.988425	2.988470	2.988515	45
974	2.988782	2.988826	2.988871	2.988915	2.988960	45
975	2.989227	2.989272	2.989316	2.989361	2.989405	45
976	2.989672	2.989717	2.989761	2.989806	2.989850	44
977	2.990117	2.990161	2.990206	2.990250	2.990194	44
978	2.990561	2.990605	2.990650	2.990694	2.990738	44
979	2.991004	2.991048	2.991093	2.991137	2.991182	44
980	2.991448	2.991492	2.991536	2.991580	2.991625	44
981	2.991890	2.991934	2.991979	2.992023	2.992067	44
982	2.992333	2.992377	2.992421	2.992465	2.992509	44
983	2.992774	2.992818	2.992863	2.992907	2.992951	44
984	2.993216	2.993260	2.993304	2.993348	2.993392	44
985	2.993657	2.993701	2.993745	2.993789	2.993833	44
986	2.994097	2.994141	2.994184	2.994229	2.994273	44
987	2.994537	2.994581	2.994625	2.994669	2.994713	44
988	2.994977	2.995021	2.995064	2.995108	2.995152	44
989	2.995416	2.995460	2.995504	2.995547	2.995591	44
990	2.995854	2.995898	2.995942	2.995986	2.996030	44
991	2.996293	2.996337	2.996380	2.996424	2.996468	44
992	2.996730	2.996774	2.996818	2.996862	2.996905	44
993	2.997168	2.997212	2.997255	2.997299	2.997343	44
994	2.997605	2.997648	2.997692	2.997736	2.997779	44
995	2.998041	2.998085	2.998128	2.998172	2.998216	44
996	2.998477	2.998521	2.998564	2.998608	2.998652	44
997	2.998913	2.998956	2.999000	2.999043	2.999087	44
998	2.999348	2.999392	2.999435	2.999478	2.999522	44
999	2.999783	2.999826	2.999870	2.999913	2.999957	43
⚙	12	26	31	35	40	Pts

A TABLE of LOGARITHMS,

N°	0	1	2	3	4	Dif
1000	3.000000	3.000043	3.000087	3.000130	3.000174	43
1001	3.000434	3.000477	3.000521	3.000564	3.000608	43
1002	3.000868	3.000911	3.000954	3.000998	3.001041	43
1003	3.001301	3.001344	3.001387	3.001431	3.001474	43
1004	3.001734	3.001777	3.001820	3.001863	3.001907	43
1005	3.002166	3.002209	3.002252	3.002296	3.002339	43
1006	3.002598	3.002641	3.002684	3.002727	3.002771	43
1007	3.003029	3.003073	3.003116	3.003159	3.003202	43
1008	3.003460	3.003504	3.003547	3.003590	3.003633	43
1009	3.003891	3.003934	3.003977	3.004021	3.004063	43
1010	3.004321	3.004364	3.004407	3.004450	3.004493	43
1011	3.004751	3.004794	3.004837	3.004880	3.004923	43
1012	3.005180	3.005223	3.005266	3.005309	3.005352	43
1013	3.005609	3.005652	3.005695	3.005738	3.005781	43
1014	3.006038	3.006081	3.006124	3.006166	3.006209	43
1015	3.006466	3.006509	3.006552	3.006594	3.006637	43
1016	3.006894	3.006936	3.006979	3.007022	3.007065	43
1017	3.007321	3.007364	3.007406	3.007449	3.007492	43
1018	3.007748	3.007790	3.007833	3.007876	3.007918	43
1019	3.008174	3.008217	3.008259	3.008302	3.008345	43
1020	3.008600	3.008643	3.008685	3.008728	3.008770	43
1021	3.009026	3.009068	3.009111	3.009153	3.009196	43
1022	3.009451	3.009493	3.009536	3.009578	3.009621	43
1023	3.009876	3.009918	3.009960	3.010003	3.010045	42
1024	3.010300	3.010342	3.010385	3.010427	3.010470	42
1025	3.010724	3.010766	3.010809	3.010851	3.010893	42
1026	3.011147	3.011190	3.011232	3.011274	3.011317	42
1027	3.011570	3.011613	3.011655	3.011697	3.011740	42
1028	3.011993	3.012035	3.012078	3.012120	3.012162	42
1029	3.012415	3.012458	3.012500	3.012542	3.012584	42
1030	3.012837	3.012879	3.012921	3.012964	3.013006	42
1031	3.013259	3.013301	3.013343	3.013385	3.013427	42
1032	3.013680	3.013722	3.013764	3.013806	3.013848	42
1033	3.014100	3.014142	3.014184	3.014226	3.014268	42
1034	3.014521	3.014562	3.014604	3.014646	3.014688	42
1035	3.014940	3.014982	3.015024	3.015066	3.015108	42
1036	3.015360	3.015402	3.015444	3.015485	3.015527	42
1037	3.015779	3.015821	3.015862	3.015904	3.015946	42
1038	3.016197	3.016239	3.016281	3.016323	3.016365	42
1039	3.016615	3.016657	3.016699	3.016741	3.016783	42
1040	3.017033	3.017075	3.017117	3.017159	3.017200	42
1041	3.017451	3.017492	3.017534	3.017576	3.017618	42
1042	3.017868	3.017909	3.017951	3.017993	3.018034	42
Dif.	43	4	9	13	17	

N°	5	6	7	8	9	Dif.
1000	3.000217	3.000260	3.000304	3.000347	3.000391	43
1001	3.000651	3.000694	3.000738	3.000781	3.000824	43
1002	3.001084	3.001128	3.001171	3 001214	3.001258	43
1003	3.001517	3.001561	3.001604	3.001647	3.001690	43
1004	3.001950	3.001993	3.002036	3.002080	3.002123	43
1005	3.002382	3.002425	3.002468	3.002512	3.002555	43
1006	3.002814	3.002857	3.002900	3.002943	3.002986	43
1007	3.003245	3.003288	3.003331	3.003374	3.003417	43
1008	3.003676	3.003719	3.003762	3.003805	3.003848	43
1009	3.004106	3.004149	3.004192	3.004235	3.004278	43
1010	3.004536	3.004579	3.004622	3.004665	3.004708	43
1011	3.004966	3.005009	3.005052	3.005095	3.005138	43
1012	3.005395	3.005438	3.005481	3.005524	3.005567	43
1013	3.005824	3.005867	3.005909	3.005952	3.005995	43
1014	3.006252	3.006295	3 006338	3.006380	3.006423	43
1015	3.006680	3.006723	3.006765	3.006808	3.006851	43
1016	3.007107	3.007150	3.007193	3.007235	3.007278	43
1017	3.007534	3.007577	3.007620	3.007662	3.007705	43
1018	3.007961	3.008004	3 008046	3.008089	3.008132	43
1019	3.008387	3.008430	3.008472	3.008515	3.008558	43
1020	3.008813	3.008856	3.008898	3.008941	3.008983	43
1021	3.009238	3.009281	3.009323	3.009366	3.009408	43
1022	3.009663	3.009706	3.009748	3.009791	3.009833	43
1023	3.010088	3.010130	3.010173	3.010215	3.010257	42
1024	3.010512	3.010554	3.010597	3 010639	3.010681	42
1025	3.010936	3.010978	3 011020	3.011063	3.011105	42
1026	3.011359	3.011401	3.011444	3.011486	3.011528	42
1027	3.011782	3.011824	3 011866	3.011908	3.011951	42
1028	3.012204	3.012246	3.012289	3.012331	3.012373	42
1029	3.012626	3.012668	3.012711	3.012753	3.012795	42
1030	3.013048	3.013090	3.013132	3.013174	3.013216	42
1031	3.013469	3.013511	3.013553	3.013595	3.013638	42
1032	3.013890	3.013932	3.013974	3.014016	3.014058	42
1033	3.014310	3.014352	3.014394	3.014436	3.014478	42
1034	3.014730	3.014772	3.014814	3.014856	3.014898	42
1035	3.015150	3.015192	3.015234	3.015276	3.015318	42
1036	3.015569	3.015611	3.015653	3.015695	3.015737	42
1037	3.015988	3.016030	3.016072	3.016114	3.016155	42
1038	3.016406	3.016448	3.016490	3.016532	3.016574	42
1039	3.016824	3.016866	3.016908	3.016950	3.016992	42
1040	3.017242	3.017284	3.017326	3.017367	3.017409	42
1041	3.017659	3.017701	3.017743	3.017784	3.017826	42
1042	3.018076	3.018118	3.018159	3.018201	3 018243	42
⊙	21	26	30	34	39	Pts.

N°	0	1	2	3	4	Dif.
1043	3.018284	3.018326	3.018368	3.018409	3.018451	42
1044	3.018700	3.018742	3.018784	3.018825	3.018867	42
1045	3.019116	3.019158	3.019199	3.019241	3.019282	42
1046	3.019532	3.019573	3.019615	3.019656	3.019698	42
1047	3.019947	3.019988	3.020030	3.020071	3.020113	41
1048	3.020361	3.020403	3.020444	3.020486	3.020527	41
1049	3.020775	3.020817	3.020858	3.020900	3.020941	41
1050	3.021189	3.021231	3.021272	3.021313	3.021355	41
1051	3.021603	3.021644	3.021685	3.021727	3.021768	41
1052	3.022016	3.022057	3.022098	3.022140	3.022181	41
1053	3.022428	3.022470	3.022511	3.022552	3.022593	41
1054	3.022841	3.022882	3.022923	3.022964	3.023005	41
1055	3.023252	3.023294	3.023335	3.023376	3.023417	41
1056	3.023664	3.023705	3.023746	3.023787	3.023828	41
1057	3.024075	3.024116	3.024157	3.024198	3.024239	41
1058	3.024486	3.024527	3.024568	3.024609	3.024650	41
1059	3.024896	3.024937	3.024978	3.025019	3.025060	41
1060	3.025306	3.025347	3.025388	3.025429	3.025470	41
1061	3.025715	3.025756	3.025797	3.025838	3.025879	41
1062	3.026124	3.026165	3.026206	3.026247	3.026288	41
1063	3.026533	3.026574	3.026615	3.026656	3.026697	41
1064	3.026942	3.026982	3.027023	3.027064	3.027105	41
1095	3.027350	3.027390	3.027431	3.027472	3.027513	41
1066	3.027757	3.027798	3.027839	3.027879	3.027920	41
1067	3.028164	3.028205	3.028246	3.028286	3.028327	41
1068	3.028571	3.028612	3.028652	3.028693	3.028734	41
1069	3.028978	3.029018	3.029059	3.029100	3.029140	41
1070	3.029384	3.029424	3.029465	3.029505	3.029546	41
1071	3.029789	3.029830	3.029871	3.029911	3.029952	41
1072	3.030195	3.030235	3.030276	3.030316	3.030357	41
1073	3.030600	3.030640	3.030681	3.030721	3.030762	40
1074	3.031004	3.031044	3.031085	3.031126	3.031166	40
1075	3.031408	3.031449	3.031489	3.031530	3.031570	40
1076	3.031812	3.031853	3.031893	3.031933	3.031974	40
1077	3.032216	3.032256	3.032296	3.032337	3.032377	40
1078	3.032619	3.032659	3.032699	3.032740	3.032780	40
1079	3.033021	3.033062	3.033102	3.033142	3.033182	40
1080	3.033424	3.033464	3.033504	3.033544	3.033585	40
1081	3.033826	3.033866	3.033906	3.033946	3.033986	40
1082	3.034227	3.034267	3.034307	3.034348	3.034388	40
1083	3.034628	3.034669	3.034709	3.034749	3.034789	40
1084	3.035029	3.035069	3.035109	3.035149	3.035189	40
1085	3.035430	3.035470	3.035510	3.035550	3.035590	40
Dif.	41	4	8	12	16	

N°	5	6	7	8	9	Dif.
1043	3.018492	3.018534	3.018576	3.018617	3.018659	42
1044	3.018908	3.018950	3.018991	3.019033	3.019075	42
1045	3.019324	3 019366	3.019407	3.016449	3.019490	42
1046	3.019739	3.019781	3.019822	3.019864	3.019905	42
1047	3.020154	3.020196	3.020237	3.020278	3.020320	41
1048	3.020568	3.020610	3.020651	3.020693	3.020734	41
1049	3.020982	3.021024	3.021065	3.021107	3.021148	41
1050	3.021396	3.021437	3.021479	3.021520	3.021561	41
1051	3 021809	3.021850	3.021892	3 021933	3.021974	41
1052	3.022222	3.022263	3.022305	3.022346	3.022387	41
1053	3.022634	3.022676	3.022717	3.022758	3.022799	41
1054	3.023047	3.023088	3.023129	3.023170	3.023211	41
1055	3.023458	3.023499	3.023540	3.023582	3.023623	41
1056	3.023869	3.023911	3.023952	3.023993	3.024034	41
1057	3.024280	3.024321	3 024362	3.024404	3.024445	41
1058	3.024691	3.024732	3.024773	3.024814	3.024855	41
1059	3.025101	3.025142	3.025183	3.025224	3.025265	41
1060	3.025511	3.025552	3.025593	3.025634	3.025674	41
1061	3.025920	3.025961	3.026002	3.026043	3.026084	41
1062	3.026329	3.026370	3.026411	3.026451	3.026492	41
1063	3.026737	3.026778	3.026819	3.026860	3.026901	41
1064	3.027146	3.027186	3.027227	3.027268	3.027309	41
1065	3.027553	3.027594	3.027635	3.027676	3.027719	41
1066	3.027961	3.028002	3.028042	3.028083	3.028124	41
1067	3.028368	3.028409	3.028449	3.028490	3.028531	41
1068	3.028774	3.028815	3.028856	3.028896	3.028937	41
1069	3.029181	3.029221	3.029262	3.029303	3.029343	41
1070	3.029587	3.029627	3.029668	3.029708	3.029749	41
1071	3.029992	3.030033	3.030073	3.030114	3.030154	41
1072	3.030397	3.030438	3.030478	3 030519	3.030559	41
1073	3.030802	3.030842	3 030883	3.030923	3.030964	41
1074	3.031206	3.031247	3.031287	3.031328	3.031368	40
1075	3.031610	3.031651	3.031691	3.031731	3.031772	40
1076	3.032014	3.032054	3.032095	3.032135	3.032175	40
1077	3.032417	3.032458	3.032498	3.032538	3.032578	40
1078	3.032820	3 032860	3.032901	3.032941	3.032981	40
1079	3.033223	3.033263	3.033303	3.033343	3.033383	40
1080	3.033625	3.033665	3 033705	3.033745	3.033785	40
1081	3,034026	3.034067	3.034107	3.034147	3.034187	40
1082	3.034428	3.034468	3.034508	3.034548	3.034588	40
1083	3.034829	3.034869	3.034909	3.034949	3.034989	40
1084	3.035230	3.035270	3.035310	3.035350	3.035390	40
1085	3.035630	3.035670	3.035710	3.035750	3.035790	40
❁	20	25	29	33	37	Pts.

TABLES
OF
Logarithmic Sines, Tangents and Secants,
WITH PROPORTIONAL PARTS,

By which an Angle may, very eaſily be determined to 5 Seconds, and generally to much leſs,

Obſerve — The Minutes increaſing downwards in the Left-hand Column of each Page, belong to the Degrees above the Tables; and thoſe increaſing upwards in the Right-hand Columns belong to the Degrees below.

The other Columns contain as under:

The Sine of the leſs Number of Degrees above. The Sine of the greater Number below, and the Co-ſine of the leſs Number below.	The Secant of the leſs Number of Degrees below. The Co-ſecant of the leſs Number above, and, ſtriking out the firſt Figure of the Index, the Complement Arithmetical of the Sine of the leſs Number above.	The Tangent of the leſs Number of Degrees above. The Tangent of the greater Number below, and the Co-tangent of the leſs Number below.	The Tangent of the leſs Number of Degrees below. The Tangent of the greater Number above, and the Co-tangent of the leſs Number above.	The Secant of the leſs Number of Degrees above. The Co-ſecant of the leſs Number below, and, ſtriking out the firſt Figure of the Index, the Complement Arithmetical of the Sine of the leſs Number below.	The Sine of the leſs Number of Degrees below. The Sine of the greater Number above, and the Co ſine of the leſs Number above.

For Sines and Tangents to Second, from 0° to 3° ſee Introduction page 10; from 3° to 8° ſee page 11; for the reſt ſee the following pages of the Introduction.

A Table of Artificial Sines,

0 — Degrees — 90.

Min.	Sine 0°	Co. Sec. 0°	Tangent 0°	Co.t 0° Tan. 90°	Secant 0°	Co.s. 0° Sine 90°	
0	0.000000	Infinite	0.000000	Infinite	10.000000	10.000000	60
1	6.463726	13.536274	6.463726	13.536274	10.000000	9.999999	59
2	6.764756	13.235244	6.764756	13.235244	10.000000	9.999999	58
3	6.940847	13.059153	6.940847	13.059153	10.000000	9.999999	57
4	7.065786	12.934214	7.065786	12.934214	10.000000	9.999999	56
5	7.162696	12.837304	7.162696	12.837304	10.000000	9.999999	55
6	7.241877	12.758123	7.241878	12.758122	10.000001	9.999999	54
7	7.308824	12.691176	7.308825	12.691175	10.000001	9.999999	53
8	7.366816	12.633184	7.366817	12.633183	10.000001	9.999999	52
9	7.417968	12.582032	7.417970	12.582030	10.000001	9.999999	51
10	7.463725	12.536275	7.463727	12.536273	10.000002	9.999998	50
11	7.505118	12.494882	7.505120	12.494880	10.000002	9.999998	49
12	7.542906	12.457093	7.542909	12.457091	10.000003	9.999997	48
13	7.577668	12.422332	7.577672	12.422328	10.000003	9.999997	47
14	7.609852	12.390147	7.609857	12.390143	10.000004	9.999996	46
15	7.639816	12.360184	7.639820	12.360180	10.000004	9.999996	45
16	7.667844	12.332156	7.667849	12.332151	10.000005	9.999995	44
17	7.694173	12.305827	7.694179	12.305821	10.000005	9.999995	43
18	7.718997	12.281003	7.719003	12.280997	10.000006	9.999994	42
19	7.742477	12.257522	7.742484	12.257516	10.000007	9.999993	41
20	7.764754	12.235246	7.764761	12.235239	10.000007	9.999993	40
21	7.785943	12.214057	7.785951	12.214049	10.000008	9.999992	39
22	7.806146	12.193854	7.806155	12.193845	10.000009	9.999991	38
23	7.825451	12.174549	7.825460	12.174540	10.000010	9.999990	37
24	7.843934	12.156066	7.843944	12.156056	10.000011	9.999989	36
25	7.861662	12.138338	7.861674	12.138326	10.000012	9.999988	35
26	7.878695	12.121305	7.878708	12.121292	10.000012	9.999988	34
27	7.895085	12.104915	7.895099	12.104901	10.000013	9.999987	33
28	7.910879	12.089121	7.910894	12.089106	10.000014	9.999986	32
29	7.926119	12.073881	7.926134	12.073866	10.000016	9.999984	31
30	7.940842	12.059158	7.940858	12.059142	10.000017	9.999983	30
	Co.s 89° Sine 179°	Secant 89°	Co.t 89° Tan. 179°	Tangent 89°	Co. sec. 89°	Sine 89°	Min.

89 — Degrees — 179.

Sine °	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
4.685	575	575	574	572	573	571	569	567	565	562	559	556

0 — Degrees — 90.

Min.	Sine 0°	Co. Sec. 0°	Tangent 0°	Co.t. 0° Tan. 90°	Secant 0°	Co.s. 0° Sine 90°	Min.
30	7.940842	12.059158	7.940858	12.059142	10.000017	9.999983	30
31	7.955082	12.044918	7.955100	12.044900	10.000018	9.999982	29
32	7.968870	12 031130	7.968889	12.031111	10 000019	9.999981	28
33	7.982233	12.017767	7.982253	12.017747	10.000020	9.999980	27
34	7.995198	12.004802	7.995219	12.004781	10.000021	9.999979	26
35	8.007787	11.992213	8.007809	11.992191	10,000023	9 999977	25
36	8.020021	11.979979	8.020045	11.979955	10.000024	9.999976	24
37	8.031919	11.968081	8.031945	11.968055	10.000025	9 999975	23
38	8.043501	11.956499	8.043527	11.956473	10.000026	9.999973	22
39	8.054781	11.945219	8 054809	11.945191	10.000028	9.999972	21
40	8.065776	11.934224	8.065806	11.934194	10.000029	9.999971	20
41	8.076500	11.923500	8.076531	11.923469	10.000031	9 999969	19
42	8.086965	11.913035	8.086997	11.913003	10.000032	9.999968	18
43	8.097183	11.902817	8.097217	11.902783	10.000034	9.999966	17
44	8.107167	11.892833	8.107202	11.892797	10.000036	9.999964	16
45	8.116926	11.883074	8.116963	11.883037	10.000037	9.999963	15
46	8.126471	11.873529	8.126510	11.873490	10.000039	9.999961	14
47	8.135810	11.864190	8.13585	11.864149	10.000041	9.999959	13
48	8.144953	11.855047	8.144996	11.855004	10.000042	9.999958	12
49	8.153907	11.846092	8.153952	11.846048	10.000044	9.999956	11
50	8.162681	11.837319	8.162727	11.837273	10.000046	9.999954	10
51	8.171280	11.828720	8.171328	11.828672	10.000048	9.999952	9
52	8.179713	11.820287	8.179763	11.820237	10.000050	9.999950	8
53	8.187985	11.812015	8.188036	11.811964	10.000052	9.999948	7
54	8.196102	11.803898	8.196156	11.803844	10.000054	9.999946	6
55	8.204070	11.795930	8.204126	11.795874	10.000056	9.999944	5
56	8.211895	11.788105	8.211953	11.788047	10.000058	9.999942	4
57	8.219581	11.780419	8.219641	11.780359	10.000060	9.999940	3
58	8.227134	11.772866	8.227195	11.772805	10.000062	9.999938	2
59	8.234557	11.765443	8.234621	11.765379	10.000064	9.999936	1
60	8.241855	11.758145	8.241921	11.758078	10.000066	9.999934	0
	Co.s. 89° Sine 179°	Secant 89°	Co.t. 89° Tan. 179°	Tangent 89°	Co. sec. 89°	Sine 89°	Min.

89 — Degrees — 179

4.685 Tan. 0°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	575	575	576	578	580	582	586	590	595	600	605	611

A Table of Artificial Sines,

1 — Degrees — 91.

Min.	Sine 1°	Co. Sec. 1°	Tangent 1°	Co.t. 1° Tan. 91°	Secant 1°	Co.s. 1° Sine 91°	
0	8.241855	11.758145	8.241921	11.758079	10.000066	9.999934	60
1	8.249033	11.750967	8.249102	11.750898	10.000068	9.999932	59
2	8.256094	11.743906	8.256165	11.743835	10.000071	9.999929	58
3	8.263042	11.736958	8.263115	11.736885	10.000073	9.999927	57
4	8.269881	11.730119	8.269956	11.730044	10.000075	9.999925	56
5	8.276614	11.723386	8.276691	11.723309	10.000078	9.999922	55
6	8.283243	11.716757	8.283323	11.716677	10.000080	9.999920	54
7	8.289773	11.710227	8.289856	11.710144	10.000082	9.999918	53
8	8.296207	11.703793	8.296292	11.703708	10.000085	9.999915	52
9	8.302546	11.697454	8.302634	11.697366	10.000087	9.999914	51
10	8.308794	11.691206	8.308884	11.691116	10.000090	9.999910	50
11	8.314954	11.685046	8.315046	11.684954	10.000093	9.999907	49
12	8.321027	11.678973	8.321122	11.678878	10.000095	9.999905	48
13	8.327016	11.672984	8.327114	11.672886	10.000098	9.999902	47
14	8.332924	11.667076	8.333025	11.666975	10.000101	9.999899	46
15	8.338753	11.661247	8.338856	11.661144	10.000103	9.999897	45
16	8.344504	11.655496	8.344610	11.655390	10.000106	9.999894	44
17	8.350181	11.649819	8.350289	11.649711	10.000109	9.999891	43
18	8.355783	11.644217	8.355895	11.644105	10.000112	9.999888	42
19	8.361315	11.638685	8.361430	11.638570	10.000115	9.999885	41
20	8.366777	11.633223	8.366895	11.633105	10.000118	9.999882	40
21	8.372171	11.627829	8.372292	11.627708	10.000121	9.999879	39
22	8.377497	11.622501	8.377622	11.622378	10.000124	9.999876	38
23	8.382764	11.617236	8.382889	11.617111	10.000127	9.999873	37
24	8.387962	11.612038	8.388092	11.611908	10.000130	9.999870	36
25	8.393101	11.606899	8.393234	11.606766	10.000133	9.999867	35
26	8.398179	11.601821	8.398315	11.601685	10.000136	9.999864	34
27	8.403199	11.596801	8.403338	11.596662	10.000139	9.999861	33
28	8.408161	11.591839	8.408304	11.591696	10.000142	9.999858	32
29	8.413068	11.586932	8.413213	11.586787	10.000146	9.999854	31
30	8.417919	11.582081	8.418068	11.581932	10.000149	9.999851	30
	Co.s. 88° Sine 178°	Secant 1°	Co.t. 88° Tan. 178°	Tangent 88°	Co. Sec. 18°	Sine 88°	Min.

88 — Degrees — 178.

Sine 1°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
4.685	553	549	545	540	536	531	525	519	514	507	501	494

Tangents and Secants.

1 — Degrees — 91.

Min.	Sine 1°	Co. Sec. 1°	Tangent 1°	Co.t. 1° Tan. 91°	Secant 1°	Co.s. 1° Sine 91°	Min.
30	8.417919	11.582081	8.418068	11.581932	10.000149	9.999851	30
31	8.422717	11.577283	8.422869	11.577131	10.000152	9.999848	29
32	8.427462	11.572538	8.427618	11.572382	10.000156	9.999844	28
33	8.432156	11.567844	8.432315	11.567685	10.000159	9.999841	27
34	8.436800	11.563200	8.436962	11.563038	10.000162	9.999838	26
35	8.441394	11.558606	8.441560	11.558440	10.000166	9.999834	25
36	8.445941	11.554059	8.446110	11.553890	10.000169	9.999831	24
37	8.450440	11.549560	8.450613	11.549387	10.000173	9.999827	23
38	8.454893	11.545107	8.455070	11.544930	10.000177	9.999823	22
39	8.459301	11.540699	8.459481	11.540519	10.000180	9.999820	21
40	8.463665	11.536335	8.463849	11.536151	10.000184	9.999816	20
41	8.467985	11.532015	8.468172	11.531828	10.000188	9.999812	19
42	8.472263	11.527737	8.472454	11.527546	10.000191	9.999809	18
43	8.476498	11.523502	8.476693	11.523307	10.000195	9.999805	17
44	8.480693	11.519307	8.480892	11.519108	10.000199	9.999801	16
45	8.484848	11.515152	8.485050	11.514950	10.000203	9.999797	15
46	8.488963	11.511037	8.489170	11.510830	10.000207	9.999793	14
47	8.493040	11.506960	8.493250	11.506750	10.000210	9.999790	13
48	8.497078	11.502922	8.497293	11.502707	10.000214	9.999786	12
49	8.501080	11.498920	8.501298	11.498702	10.000218	9.999782	11
50	8.505045	11.494955	8.505267	11.494733	10.000222	9.999778	10
51	8.508974	11.491026	8.509200	11.490800	10.000226	9.999774	9
52	8.512867	11.487133	8.513098	11.486902	10.000231	9.999769	8
53	8.516726	11.483274	8.516961	11.483039	10.000235	9.999765	7
54	8.520551	11.479449	8.520790	11.479210	10.000239	9.999761	6
55	8.524343	11.475657	8.524586	11.475414	10.000243	9.999757	5
56	8.528102	11.471898	8.528349	11.471651	10.000247	9.999753	4
57	8.531828	11.468172	8.532080	11.467920	10.000252	9.999748	3
58	8.535523	11.464477	8.535779	11.464221	10.000256	9.999744	2
59	8.539186	11.460814	8.539447	11.460553	10.000260	9.999740	1
60	8.542819	11.457181	8.543084	11.456916	10.000265	9.999735	0
	Co.s. 88° Sine 178°	Secant 88°	Co.t. 88° Tan. 178°	Tangent 88°	Co. Sec. 88°	Sine 88°	Min.

88 — Degrees — 178.

4.685 Tan. 1°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	619	627	635	643	653	663	674	685	697	710	723	737

A Table of Artificial Sines,

2 — Degrees — 92.

Min.	Sine 2°	Co. Sec. 2°	Tangent 2°	Co.t. 2° Tan. 92°	Secant 2°	Co.s. 2° Sine 92°	Min.
0	8.542819	11.457181	8.543084	11.456916	10.000265	9.999735	60
1	8.546422	11.453578	8.546691	11.453309	10.000269	9.999731	59
2	8.549995	11.450005	8.550268	11 449732	10.000274	9.999726	58
3	8.553539	11.446461	8.553817	11.446183	10.000278	9.999722	57
4	8.557054	11.442946	8.557336	11.442664	10.000283	9.999717	56
5	8.560540	11.439460	8.560828	11.439172	10.000287	9.999713	55
6	8.563999	11.436001	8.564291	11.435709	10.000292	9.999708	54
7	8.567431	11.432569	8.567727	11.432273	10.000296	9.999704	53
8	8.570836	11.429164	8.571137	11.428863	10.000301	9.999699	52
9	8.574214	11.425786	8.574520	11.425480	10.000306	9.999694	51
10	8.577566	11.422434	8.577877	11.422123	10.000311	9.999689	50
11	8.580892	11.419108	8.581208	11.418792	10.000315	9.999685	49
12	8.584193	11.415807	8.584514	11.415486	10.000320	9.999680	48
13	8.587469	11.412531	8.587795	11.412205	10.000325	9.999675	47
14	8.590721	11.409279	8.591051	11.408949	10.000330	9.999670	46
15	8.593948	11.406052	8.594283	11.405717	10.000335	9.999665	45
16	8.597152	11.402848	8.597492	11.402508	10.000340	9.999660	44
17	8.600332	11.399668	8.600677	11.399323	10.000345	9.999655	43
18	8.603489	11.396511	8.603839	11.39616	10.000350	9.999650	42
19	8.606623	11.393377	8.606978	11.393022	10.000355	9.999645	41
20	8.609734	11.390266	8.610094	11.389906	10.000360	9.999640	40
21	8.612823	11.387177	8.613189	11.386811	10.000365	9.999635	39
22	8.615891	11.384109	8.616262	11.383738	10.000371	9.999629	38
23	8.618937	11.381063	8.619313	11.380687	10.000376	9.999624	37
24	8.621962	11.378038	8.622343	11.377657	10.000381	9.999619	36
25	8.624965	11.375035	8.625352	11.374648	10.000386	9.999614	35
26	8.627948	11.372052	8.628340	11.371660	10.000392	9.999608	34
27	8.630911	11.369089	8.631308	11.368692	10.000397	9.999603	33
28	8.633854	11.366146	8.634256	11.365744	10.000403	9.999597	32
29	8.636776	11.363224	8.637184	11.362816	10.000408	9.999592	31
30	8.639680	11.360320	8.640093	11.359907	10.000414	9.999586	30
	Co.s. 87° Sine 177°	Secant 87°	Co.t, 87° Tan 177°	Tangent 87°	Co, Sec. 87°	Sine 87°	Min.

87. — Degrees — 177.

4.685 Sine 2°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	487	479	471	463	455	446	437	428	418	408	398	387

2 — Degrees — 92.

Min.	Sine 2°	Co. Sec. 2°	Tangent 2°	Co.t. 2° Tan. 92°	Secant 2°	Co.t. 2° Sine 92°	Min.
30	8.639680	11.360320	8.640093	11.359907	10.000414	9.999586	30
31	8.642563	11.357437	8.642982	11.357018	10.000419	9.999581	29
32	8.645428	11.354572	8.645853	11.354147	10.000425	9.999575	28
33	8.648274	11.351726	8.648704	11.351296	10.000430	9.999570	27
34	8.651102	11.348898	8.651537	11.348463	10.000436	9.999564	26
35	8.653911	11.346089	8.654352	11.345648	10.000442	9.999558	25
36	8.656702	11.343298	8.657149	11.342851	10.000447	9.999553	24
37	8.659475	11.340525	8.659928	11.340072	10.000453	9.999547	23
38	8.662230	11.337770	8.662689	11.337311	10.000459	9.999541	22
39	8.664968	11.335032	8.665433	11.334567	10.000465	9.999535	21
40	8.667689	11.332311	8.668160	11.331840	10.000471	9.999529	20
41	8.670393	11.329607	8.670870	11.329130	10.000476	9.999524	19
42	8.673080	11.326920	8.673563	11.326437	10.000482	9.999518	18
43	8.675751	11.324249	8.676239	11.323761	10.000488	9.999512	17
44	8.678405	11.321595	8.678900	11.321100	10.000494	9.999506	16
45	8.681043	11.318957	8.681544	11.318456	10.000500	9.999500	15
46	8.683665	11.316335	8.684172	11.315828	10.000507	9.999493	14
47	8.686272	11.313728	8.686784	11.313216	10.000513	9.999487	13
48	8.688863	11.311137	8.689381	11.310619	10.000519	9.999481	12
49	8.691438	11.308562	8.691963	11.308037	10.000525	9.999475	11
50	8.693998	11.306002	8.694529	11.305471	10.000531	9.999469	10
51	8.696543	11.303457	8.697081	11.302919	10.000537	9.999463	9
52	8.699073	11.300927	8.699617	11.300383	10.000544	9.999456	8
53	8.701589	11.298411	8.702139	11.297861	10.000550	9.999450	7
54	8.704090	11.295910	8.704646	11.295354	10.000557	9.999443	6
55	8.706577	11.293423	8.707140	11.292860	10.000563	9.999437	5
56	8.709049	11.290951	8.709618	11.290382	10.000569	9.999431	4
57	8.711507	11.288493	8.712083	11.287917	10.000576	9.999424	3
58	8.713952	11.286048	8.714534	11.285465	10.000582	9.999418	2
59	8.716383	11.283617	8.716972	11.283028	10.000589	9.999411	1
60	8.718800	11.281200	8.719396	11.280604	10.000596	9.999404	0
	Co.s. 87° Sine 177°	Secant 87°	Co.t. 87° Tan 177°	Tangent 87°	Co. Sec. 87°	Sine 87°	Min.

87 — Degrees — 177.

4.685 Tan. 2°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	751	766	782	798	815	833	851	869	888	908	929	950

A Table of Artificial Sines,

3 — Degrees — 93.

Min.	Sine 3°	Co. Sec. 3°	Tangent 3°	Co.t. 3° an. 93°	Secant 3°	Co.s. 3° Sine 93°	
0	8.718800	11.281200	8.719396	11.280604	10.000596	9.999404	60
1	8.721204	11.278796	8 721806	1.278194	10.000602	9.999398	59
2	8.723595	11.276405	8.724204	11.27 796	10.000609	9.999391	58
3	8.725972	11.274028	8.726588	1:273412	10.000616	9.999384	57
4	8.728337	11.271663	8.728959	1.271041	10.000622	9.999378	56
5	8.730688	11.269312	8.731317	11 268683	10.000629	9.999371	55
6	8.733027	11.266973	8.733663	11.266337	10.000636	9.999364	54
7	8.735354	11.264646	8.735996	11.264004	10.000643	9.999357	53
8	8.737667	11.262333	8.738317	11.261683	10.000650	9.999350	52
9	8 739969	11.260031	8.74062	11.259374	10.000657	9.999343	51
10	8.742259	11.257741	8.742922	11.257078	10.000664	9.999336	50
11	8.744536	11.255464	8.745207	11.254793	10. 00671	9.999329	49
12	8.746802	11.253198	8.747479	11.252521	10.000678	9.999322	48
13	8.749055	11.250945	8.749740	11.250260	10.000685	9.999315	47
14	8.751297	11.248703	8.751989	11.248011	10.000692	9.999308	46
15	8.753528	11.246472	8.754227	11.245773	10.000699	9.999301	45
16	8.755747	11.244253	8.756453	11.243547	10.000706	9.999294	44
17	8.757955	11.242045	8.758668	11.241332	10 000714	9.999286	43
18	8.760151	11.239849	8.760872	11.239128	10.000721	9.999279	42
19	8.762337	11.237663	8.763065	11.236935	10.000728	9.999272	41
20	8.764511	11.235489	8.765246	11.234754	10.000735	9.999265	40
21	8.766675	11.233325	8.767417	11.232583	10.000743	9.999257	39
22	8.768828	11.231172	8.769578	11.230422	10.000750	9.999250	38
23	8.770970	11.229030	8.771727	11 228273	10.000758	9.999242	37
24	8.773101	11.226899	8 773866	1.226134	10.000765	9.999235	36
25	8.775223	11.224777	8.775995	11.224005	10.00077	9.999227	35
26	8.777333	11.222667	8.778114	11.221886	10.000780	9.999220	34
27	8.779434	11.220566	8.780222	11.219778	10.000788	9.999212	33
28	8.781524	11.218476	8.78232c	11.217680	10.0007 5	9.999205	32
29	8.783605	11.216395	8.784408	11.215592	10.000803	9.999197	31
30	8.785675	11.214325	8.786486	11.213514	10.000811	9.999189	30
	Co.s. 86° Sine 176°	Secant 86°	Co.t. 86° Tan 176°	Tangent 86°	Co. Sec. 86°	Sine 86°	Min.

86 — Degrees — 176.

Sine 3°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	40	39	38	37	36	35	34	33	33	32	31	31

3 — Degrees — 93.

Min.	Sine 3°	Co. Sec. 3°	Tangent 3°	Co.t. 3° Tan. 93°	Secant 3°	Co.s. 3° Sine 93°	
30	8.785675	11.214325	8.786486	11.213514	10.000811	9.999189	30
31	8.787736	11.212264	8.788554	11.211446	10.000819	9.999181	29
32	8.789787	11.210213	8.790613	11.209387	10.000826	9.999174	28
33	8.791828	11.208172	8.792662	11.207338	10.000834	9.999166	27
34	8.793859	11.206141	8.794701	11.205299	10.000842	9.999158	26
35	8.795881	11.204119	8.796731	11.203269	10.000850	9.999150	25
36	8.797894	11.202106	8.798752	11.201248	10.000858	9.999142	24
37	8.799897	11.200103	8.800763	11.199237	10.000866	9.999134	23
38	8.801892	11.198108	8.802765	11.197235	10.000874	9.999126	22
39	8.803876	11.196124	8.804758	11.195242	10.000882	9.999118	21
40	8.805852	11.194148	8.806742	11.193258	10.000890	9.999110	20
41	8.807819	11.192181	8.808717	11.191283	10.000898	9.999002	19
42	8.809777	11.190223	8.810683	11.189317	10.000906	9.999094	18
43	8.811726	11.188274	8.812641	11.187359	10.000915	9.999086	17
44	8.813667	11.186333	8.814589	11.185411	10.000923	9.999077	16
45	8.815599	11.184401	8.816529	11.183471	10.000931	9.999069	15
46	8.817522	11.182478	8.818461	11.181539	10.000939	9.999061	14
47	8.819436	11.180564	8.820384	11.179616	10.000947	9.999053	13
48	8.821343	11.178657	8.822298	11.177702	10.000956	9.999044	12
49	8.823240	11.176760	8.824205	11.175795	10.000964	9.999036	11
50	8.825130	11.174870	8.826103	11.173897	10.000973	9.999027	10
51	8.827011	11.172989	8.827992	11.172008	10.000981	9.999019	9
52	8.828884	11.171116	8.829874	11.170126	10.000990	9.999010	8
53	8.830749	11.169251	8.831748	11.168252	10.000998	9.999002	7
54	8.832607	11.167393	8.833613	11.166387	10.001007	9.998993	6
55	8.834456	11.165544	8.835471	11.164529	10.001016	9.998984	5
56	8.836297	11.163703	8.837321	11.162679	10.001024	9.998976	4
57	8.838130	11.161870	8.839163	11.160837	10.001033	9.998967	3
58	8.839956	11.160044	8.840998	11.159002	10.001042	9.998958	2
59	8.841774	11.158226	8.842825	11.157175	10.001050	9.998950	1
60	8.843585	11.156415	8.844644	11.155356	10.001059	9.998941	0
	Co.s. 86° Sine 176°	Secant 86°	Co.t. 86° Tan 176°	Tangent 86°	Co. Sec. 86°	Sine 0°	Min.

86 — Degrees — 176.

86° Tan. 3°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	40	39	38	37	36	35	35	34	33	32	32	31

A Table of Artificial Sines,

4 — Degrees — 94.

Min.	Sine 4°	Co. Sec. 4°	Tangent 4°	Co.t. 4° Tan. 94°	Secant 4°	Co.s. 4° Sine 94°	
0	8.843585	11.156415	8.844644	11.155356	10.001059	9.998941	60
1	8.84538	11.154613	8.846455	11.153545	10.001068	9.998932	59
2	8.847183	11.152817	8.848260	11.151740	10.001077	9.998923	58
3	8.848971	11.151029	8.850057	11.149943	10.001086	9.998914	57
4	8.8507 1	11.149249	8.851846	11.148154	10.001095	9.998905	56
5	8.8 2525	11.147475	8.853628	11.146372	10.001104	9.998896	55
6	8.851291	11.145709	8.8 40	11.144597	10.001113	9.998887	54
7	8.856049	11.14395	8.857171	11.142829	10.001122	9.998878	53
8	8.857801	11.142199	8.858932	11.141068	10.001131	9.998869	52
9	8.859546	11.140454	8.860686	11.139314	10.001140	9.998860	51
10	8.86 283	11.138717	8.862433	11.137567	10.001149	9.9 8851	50
11	8.863014	11.136986	8.864173	11.135827	10.001159	9.998841	49
12	8.864734	11.135262	8.865906	11.134094	10.001168	9.998832	48
13	8.866455	11.133 45	8.867632	11.132368	10.001177	9.998823	47
14	8.868165	11.131835	8.869 51	11.130649	10.001187	9.998813	46
15	8.86 868	11.130132	8 871064	11.128936	10.001196	9.998804	45
16	8.871565	11.128435	8.872770	11.127230	10.001205	9.998795	44
17	8.873255	11.126745	8.874469	11.125531	10.001215	9.998785	43
18	8.874938	11.125062	8.876162	11.123838	10.001224	9.998776	42
19	8.876615	11.123385	8.877849	11.122151	10.001233	9.998766	41
20	8.878285	11.1217 5	8.879529	11.12047	10.001243	9.998757	40
21	8.879949	11.120051	8.881202	11.118798	10.001253	9.998747	39
22	8.881607	11.118393	8.882869	11.117131	10.001262	9.998738	38
23	8.883258	11.116742	8.884530	11.115470	10.001272	9.998728	37
24	8,884903	11.115097	8.886185	11.113815	10.001282	9.998718	36
25	8.886542	11.113458	8.887833	11.112167	10.001292	9.998708	35
26	8.888174	11.111826	8.889476	11.110524	10.001301	9.998699	34
27	8.889801	11.110199	8.891112	11.108888	10.001311	9.998689	33
28	8.891421	11.108579	8.892742	11.107258	10.001321	9.998679	32
29	8.893035	11.106965	8.894366	11.105634	10.001331	9.998669	31
30	8,8946 3	11.105357	8.895984	11.104016	10.001341	9.998659	30
	Co.s. 85° Sine 175°	Secant 85°	Co.t. 85° Tan. 175°	Tangent 85°	Co. Sec. 85°	Sine 85°	Min.

85 — Degrees — 175.

Sine 4°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	30	29	29	28	28	27	27	26	26	25	25	25

4 — Degrees — 94.

Min.	Sine 4°	Co. Sec. 4°	Tangent 4°	Co.t. 4° Tan. 94°	Secant 4°	Co.s. 4° Sine 94°	Min.
30	8.894643	11.105357	8.895984	11.104016	10.001341	9.998659	30
31	8.890246	11.103754	8.89 596	11.102404	10.001351	9.998649	29
32	8.897842	11.102158	8.899203	11.100797	10.001361	9.998639	28
33	8.899432	11.100568	8.900803	11.099197	10.001371	9.998629	27
34	8 901017	11.098983	8.902398	11.097602	10.001381	9.998619	26
35	8.902596	11.097404	8.903987	11.096013	10.001391	9.998609	25
36	8.904169	11.095831	8.905570	11.094430	10.001401	9.998599	24
37	8.905736	11.094264	8.907147	11.092853	10.001411	9.998589	23
38	8.907297	11.092703	8.908719	11.091281	10.001422	9.998578	22
39	8.908853	11.091147	8.910285	11.089715	10.001432	9.998568	21
40	8.910404	11.089596	8.911846	11.088154	10.001442	9.998558	20
41	8.911949	11.088051	8.913401	11.086599	10.001452	9.998548	19
42	8.913488	11.086512	8.914951	11.085049	10.001463	9.998537	18
43	8.915022	11.084978	8.916495	11.083505	10.001473	9.998527	17
44	8.916550	11.083450	8.918034	11.081966	10.001484	9.998516	16
45	8.918073	11.081927	8 919568	11.080432	10.001494	9.998506	15
46	8.919591	11.080409	8.921096	11.078904	10.001505	9.998495	14
47	8.921103	11.078897	8.922619	11.077381	10.001515	9.998485	13
48	8.922610	11.077390	8.924136	11.075864	10.001526	9.998474	12
49	8.924112	11.075888	8.925649	11.074351	10.001536	9.998464	11
50	8.925609	11.074391	8.927156	11.072844	10.001547	9.998453	10
51	8.927100	11.072900	8.928658	11.071342	10.001558	9.998442	9
52	8.928587	11.071413	8.930155	11.069845	10.001569	9.998431	8
53	8.930068	11.069932	8.931647	11.068353	10.001579	9.998421	7
54	8.931544	11.068456	8.933134	11.066866	10.001590	9.998410	6
55	8.933015	11.066985	8.934616	11.065384	10.001601	9.998399	5
56	8.934481	11.065519	8.936093	11.063907	10.001612	9.998388	4
57	8.935942	11.064058	8.937565	11.062435	10.001623	9.998377	3
58	8.937398	11.062602	8.939032	11.060968	10.001634	9.998366	2
59	8.938850	11.061150	8.940494	11.059506	10.001645	9.998355	1
60	8.940296	11.059704	8 941952	11.058048	10.001656	9.998344	0
	Co.s. 85° Sine 175°	Secant 85°	Co.t. 85° Tan. 175°	Tangent 85°	Co. Sec. 85°	Sine 85°	Min.

85 — Degrees — 175.

85 Tan. 1°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	30	30	29	28	28	27	27	26	26	26	25	25

A Table of Artificial Sines,

5 — Degrees — 95.

Min.	Sine 5°	Co. Sec. 5°	Tangent 5°	Co.t. 5° Tan. 95°	Secant 5°	Co.s. 5° Sine 95°	Min.
0	8.940296	11.059704	8.941952	11.058048	10.001656	9.998344	60
1	8.941738	11.058262	8.943404	11.056596	10.001667	9.998333	59
2	8.943174	11.056826	8.944852	11 055148	10.001678	9.998322	58
3	8.944606	11.055394	8.946295	11.053705	10.001689	9.998311	57
4	8.946034	11.053966	8.947734	11.052266	10.001700	9.998300	56
5	8.947456	11.052544	8.949168	11.050832	10.001711	9.998289	55
6	8.948874	11.051126	8.950597	11.049403	10.001723	9.998277	54
7	8.950287	11.049713	8.952021	11.047979	10.001734	9.998266	53
8	8.951696	11.048304	8.953441	11.046559	10.001745	9.998255	52
9	8.953100	11.046900	8.954856	11.045144	10.001757	9.998243	51
10	8.954499	11.045501	8.956267	11.043733	10.001768	9.998232	50
11	8.955894	11.044106	8.957674	11.042326	10.001780	9.998220	49
12	8.957284	11.042716	8.959075	11.040925	10.001791	9.998209	48
13	8.958670	11.041330	8.960473	11.039527	10.001803	9.998197	47
14	8.960052	11.039948	8.961866	11.038134	10.001814	9.998186	46
15	8.961429	11.038571	8.963255	11.036745	10.001826	9.998174	45
16	8.962801	11.037199	8.964639	11.035361	10.001837	9.998163	44
17	8.964170	11.035830	8.966019	11.033981	10.001849	9.998151	43
18	8.965534	11.034466	8.967394	11.032606	10.001861	9.998139	42
19	8.966893	11.033107	8.968766	11.031234	10.001872	9.998128	41
20	8.968249	11.031751	8.970133	11.029867	10.001884	9.998116	40
21	8.969600	11.030400	8.971496	11.028504	10.001896	9.998104	39
22	8.970947	11.029053	8.972855	11.027145	10.001908	9.998092	38
23	8.972289	11.027711	8.974209	11.025791	10.001920	9.998080	37
24	8.973628	11.026372	8.975560	11.024440	10.001932	9.998068	36
25	8.974962	11.025038	8.976906	11.023094	10.001944	9.998056	35
26	8.976293	11.023707	8.978248	11.021752	10.001956	9.998044	34
27	8.977619	11.022381	8.979586	11.020414	10.001968	9.998032	33
28	8.978941	11.021059	8.980921	11.019079	10.001980	9.998020	32
29	8.980259	11.019741	8.982251	11.017749	10.001992	9.998008	31
30	8.981573	11.018427	8.983577	11.016423	10.002004	9.997996	30
	Co.s. 84° Sine 174°	Secant 84°	Co.t. 84° Tan 174°	Tangent 84°	Co. Sec. 84°	Sine 84°	Min.

84 — Degrees — 174.

4.685 Sine 2°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	24	24	23	23	23	22	22	21	21	21	21	20

5 — Degrees — 95.

Min.	Sine 5°	Co. Sec. 5°	Tangent 5°	Co.t. 5° Tan. 95°	Secant 5°	Co.s. 5° Sine 95°	Min.
30	8.981573	11.018427	8.983577	11.016423	10.002004	9.997996	30
31	8.982883	11.017117	8.984899	11.015101	10.002016	9.997984	29
32	8.984189	11.015811	8.986217	11.013783	10 002028	9.997972	28
33	8.985491	11.014509	8.987532	11.012468	10.002041	9.997959	27
34	8.986789	11.013211	8 988842	11.011158	10.002053	9.997947	26
35	8.988083	11.011917	8.990149	11.009851	10,002065	9 997935	25
36	8.989374	11.010626	8.991451	11.008549	10.002078	9.997922	24
37	8.990660	11.009340	8.992750	11.007250	10.002090	9 997910	23
38	8.991943	11.008057	8.994045	11.005955	10.002103	9.99789	22
39	8.993222	11.006778	8.995337	11.004663	10.002115	9.99788	21
40	8.994497	11.005503	8.996624	11.003376	10.002127	9.997872	20
41	8.995768	11.004232	8.997908	11.002092	10.002140	9 997860	19
42	8.997036	11.002964	8.999188	11.000812	10.002153	9.997847	18
43	8.998299	11.001701	9.000465	10.999535	10.002165	9.997835	17
44	8.999560	11.000441	9.001738	10.998262	10.002178	9.997822	16
45	9.000816	10.999184	9.003007	10.996993	10.002191	9.997809	15
46	9.002069	10.997931	9.004272	10.995728	10.002203	9.997797	14
47	9.003318	10.996682	9.005534	10.994466	10.002216	9.997784	13
48	9.004563	10.995437	9.006792	10.993208	10.002229	9.997771	12
49	9.005805	10.994195	9.008047	10.991953	10.002242	9.997758	11
50	9.007044	10.992956	9.009298	10.990702	10.002255	9.997745	10
51	9.008278	10 991722	9.010546	10.989454	10.002268	9.997732	9
52	9.009510	10 990490	9.011790	10.988210	10.002281	9.997719	8
53	9.010737	10.989263	9 013031	10.986969	10.002294	9.997706	7
54	9.011962	10.988038	9.014268	10.985732	10.002307	9.997693	6
55	9.013182	10.986818	9.015502	10.984498	10.002320	9.997680	5
56	9.014400	10.985600	9.016732	10.983268	10.002333	9.997667	4
57	9.015613	10.984387	9.017959	10.982041	10.002346	9.997654	3
58	9.016824	10.983176	9.019183	10.980817	10.002359	9.997641	2
59	9.018031	10.981969	9.020403	10.979597	10.002372	9.997628	1
60	9.019235	10.980765	9.021620	10.978380	10.002386	9.997614	0
	Co.s. 84° Sine 174°	Secant 84°	Co.t. 84° Tan. 174°	Tangent 84°	Co. sec. 84°	Sine 84°	Min.

84 — Degrees — 174

84° Tan. 5°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	24	24	23	23	23	22	22	22	21	21	21	20

A Table of Artificial Sines,

6 — Degrees — 96.

Min.	Sine 6°	Co. Sec. 6°	Tangent 6°	Co.t 6° Tan.96°	Secant 6°	Co.s. 6° Sine 96°	
0	9.019235	10.980765	9.021620	10.978380	10.002386	9.997614	60
1	9.020435	10.979565	9.022834	10.977166	10.002399	9.997601	59
2	9.021632	10.978368	9.024044	10 975956	10.002411	9.997588	58
3	9.022825	10.977175	9 0 5251	10.974749	10.002426	9.997574	57
4	9.024016	10.975984	9.026455	10.973545	10.002439	9.997561	56
5	9.025203	10.974797	9.027655	10.972345	10.002453	9.997547	55
6	9.026386	10.973614	9.028852	10.971148	10.002466	9.997534	54
7	9.027567	10.972433	9.030046	10.969954	10.002480	9.997520	53
8	9.028744	10.971256	9.031237	10.968763	10.002493	9.997507	52
9	9.029918	10.970082	9.032425	10.967575	10.002507	9.997493	51
10	9.031089	10.968911	9.033609	10.966391	10.002520	9.997480	50
11	9.032257	10.967744	9.034791	10.965209	10.002534	9.997466	49
12	9.033421	10.966579	9.035969	10.964031	10.002548	9.997452	48
13	9.034582	0.965418	9.037144	10.962856	10.002561	9.997439	47
14	9.035741	10.964259	9.0383 6	10.961684	10.002575	9.997425	46
15	9.036896	10.963104	9.039485	10.960515	10.002589	9.997411	45
16	9.038048	10.961952	9.040651	10.959349	10.002603	9.997397	44
17	9.039197	10.960803	9.041813	10.958187	10.002617	9.99 383	43
18	9.040342	10.959658	9.042973	10.957027	10.002631	9.997369	42
19	9.041485	10.958515	9.044130	10.9558 0	10.002645	9.997355	41
20	9.042625	10.957375	9.045284	10.954716	10.002659	9.997341	40
21	9.043762	10.956238	9.046434	10.953566	10.002675	9.997327	39
22	9.044895	10.955105	9.04 582	10.952418	10.002687	9.997313	38
23	9.046026	10.953974	9.048727	10.951273	10.002701	9.997299	37
24	9.047154	10.9528 6	9.049869	10.950131	10.002715	99.97285	36
25	9.048279	10.951721	9.051008	10.948992	10.002729	9.997271	35
26	9.049400	10.950600	9.052144	10.947856	10.002743	9.997257	34
27	9.050519	10.949481	9.053277	10.946723	10.002758	9.997242	33
28	9.051635	10.948365	9.054407	10.945593	10.002772	9.997228	32
29	9.052749	10.947251	9.055535	10.944465	10.002786	9.997214	31
30	9.053859	10.946141	9.056659	10.943341	10.002801	9.997199	30
	Co.s 83° Sine 173°	Secant 83°	Co.t 83° Tan.173°	Tangent 83°	Co. sec. 83°	Sine 83°	Min.

83 — Degrees — 173.

Sine 6°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	20	20	19	19	19	19	18	18	18	18	18	17

6 — Degrees — 96.

Min.	Sine 6°	Co. Sec. 6°	Tangent 6°	Co.t. 6° Tan. 96°	Secant 6°	Co.s. 6° Sine 96°	Min.
30	9.053859	10.946141	9.056059	10.943341	10.002801	9.997199	30
31	9.054966	10.945034	9.057781	10.942219	10.002815	9.997185	29
32	9.056071	10.943929	9.058900	10.941100	10.002830	9.997170	28
33	9.057172	10.942828	9.060016	10.939984	10.002844	9 997156	27
34	9.058271	10.941729	9.061130	10.938870	10.002859	9.997141	26
35	9.059367	10.940633	9.062240	10.937768	10.002873	9.997127	25
36	9.060460	10.939540	9.063348	10.936652	10.002888	9.997112	24
37	9.061551	10.938449	9.064453	10.935547	10.002902	9.997098	23
38	9.062639	10.937361	9.065556	10.934444	10.002917	9.997083	22
39	9.063724	10.936276	9.066655	10.933345	10.002932	9.997068	21
40	9.064806	10.935194	9.067752	10.932248	10 002947	9.997053	20
41	9.065885	10.934115	9.068846	10.931154	10.002961	9.997039	19
42	9.066962	10.933038	9.069938	10.930062	10.002976	9.997024	18
43	9.068036	10.931964	9.071027	10.928973	10.002991	9.997009	17
44	9.069107	10.930893	9.072113	10.927887	10.003006	9.996994	16
45	9.070176	10.929824	9.073197	10.926803	10.003021	9.996979	15
46	9.071242	10.928758	9.074278	10.925722	10.003036	9.996964	14
47	9.072306	10.927694	9.075356	10.924644	10.003051	9.996949	13
48	9.073366	10.926634	9.076432	10.923568	10.003066	9.996934	12
49	9.074424	10.925576	9.077505	10.922495	10.003081	9.996919	11
50	9.075480	10.924520	9.078576	10.921424	10.003096	9.996904	10
51	9.076533	10.923467	9.079644	10.920356	10.003111	9.996889	9
52	9.077583	10.922417	9.080710	10.919290	10.003126	9.996874	8
53	9.078631	10.921369	9.081773	10.918227	10.003142	9.996858	7
54	9.079676	10.920324	9.082833	10.917167	10.003157	9.996843	6
55	9.080719	10.919281	9.083891	10.916109	10.003172	9.996828	5
56	9.08175	10.918241	9.084947	10.915053	10.003188	9.99 812	4
57	9.082797	10 917203	9.086000	10.914000	10.00320	9.996797	3
58	9.083832	10.916168	9.087050	10.912950	10.003218	9.996782	2
59	9.08 864	10.915136	9.088038	10.911902	10.003234	9.996766	1
60	9.085894	10.914106	9.089144	10.910856	10.003249	9.996751	0
	Co.s. 83° Sine 173°	Secant 83°	Co.t. 83° Tan 173°	Tangent 83°	Co. Sec. 83°	Sine 83°	Min.

83 — Degrees — 173.

83 Tan. 6°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	20	20	20	19	19	19	19	18	18	18	18	18

A Table of Artificial Sines,

7 — Degrees — 97.

Min.	Sine 7°	Co. Sec. 7°	Tangent 7°	Co.t. 7° Tan. 97°	Secant 7°	Co.s. 7° Sine 97°	
0	9.085894	10.914106	9.089144	10.910856	10.003249	9.996751	60
1	9.086922	10.913078	9.090187	0.909813	10.003265	9.996735	59
2	9.087947	10.912053	9.091228	10.908772	10.003280	9.996720	58
3	9.088970	10.911030	9.092266	10.907734	10.003296	9.996704	57
4	9.089990	10.910010	9.093302	10.906698	10.003312	9.996688	56
5	9.091008	10.908992	9.094336	10.905664	10.003327	9.996673	55
6	9.092024	10.907976	9.095367	10.904633	10.003343	9.996657	54
7	9.093037	10.906963	9.096395	10.903605	10.003359	9.996641	53
8	9.094047	10.905953	9.097422	10.902578	10.003375	9.996625	52
9	9.095056	10.904944	9.098446	10.901554	10.003390	9.996610	51
10	9.096062	10.903938	9.099468	10.900532	10.003406	9.996594	50
11	9.097066	10.902933	9.100487	10.899513	10. 03422	9.996578	49
12	9.098066	10.901934	9.101504	10.898496	10.003438	9.996562	48
13	9.099065	10.900935	9.102519	10.897481	10.003454	9.996546	47
14	9.100062	10.899938	9.103532	10.896468	10.003470	9.996530	46
15	9.101056	10.898944	9.104542	10.895458	0.003486	9.996514	45
16	9.102048	10.897952	9.105550	10.894450	10.003502	9.996498	44
17	9.103037	10.896963	9.106556	10.893444	10.003518	9.996482	43
18	9.104025	10.895975	9.107559	10.892441	10.003535	9.996465	42
19	9.105010	10.894990	9.108560	10.891440	10.003551	9.996449	41
20	9.105992	10.894008	9.109559	10.890441	10.003567	9.996433	40
21	9.106973	10.893027	9.110556	10 889444	10.003583	9.996417	39
22	9.107951	10.892049	9.111551	10 888449	10.003600	9.996400	38
23	9.108927	10.891073	9.112543	10.887457	10.003616	9.996384	37
24	9.109901	10.890099	9.113533	10.886467	10.003632	9.996368	36
25	9.110873	10.889127	9.114521	10.885479	10 003649	9.996351	35
26	9.111842	10.888158	9.115507	10.884493	10.003665	9.996335	34
27	9.112809	10.887191	9.116491	10.883509	0.003682	9.996318	33
28	9.113774	10.886226	9.117472	10.882528	10.003698	9.996302	32
29	9.114737	10.885263	9.118452	10.881548	10.003715	9.996285	31
30	9.115698	10.884302	9.119429	10.880571	10.003731	9.996269	30
	Co.s. 82° Sine 172°	Secant 82°	Co.t. 82° Tan 172°	Tangent 82°	Co. Sec. 82°	Sine 81°	Min.

82 — Degrees — 172.

Sine 30°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	17	17	17	17	16	16	16	16	16	15	15	15

Tangents and Secants.

7 — Degrees — 97.

Min.	Sine 7°	Co. Sec. 7°	Tangent 7°	Co.t. 7° Tan. 97°	Secant 7°	Co.s. 7° Sine 97°	Min.
30	9.115698	10.884302	9.119429	10.880571	10.003731	9.996269	30
31	9.116656	10.883344	9.120404	10.879596	10.003748	9.996252	29
32	9.117613	10.882387	9.121377	10.878623	10.003765	9.996235	28
33	9.118567	10.881433	9.122348	10.877652	10.003781	9.996219	27
34	9.119519	10.880481	9.123317	10.876683	10.003798	9.996202	26
35	9.120469	10.879531	9.124284	10.875716	10.003815	9.996185	25
36	9.121417	10.878583	9.125249	10.874751	10.003832	9.996168	24
37	9.122362	10.877638	9.126211	10.873789	10.003849	9.996151	23
38	9.123306	10.876694	9.127172	10.872828	10.003866	9.996134	22
39	9.124248	10.875752	9.128130	10.871870	10.003883	9.996117	21
40	9.125187	10.874813	9.129087	10.870913	10.003900	9.996100	20
41	9.126125	10.873875	9.130041	10.869959	10.003917	9.996083	19
42	9.127060	10.872940	9.130994	10.869006	10.003934	9.996066	18
43	9.127993	10.872007	9.131944	10.868056	10.003951	9.996049	17
44	9.128925	10.871075	9.132893	10.867107	10.003968	9.996032	16
45	9.129854	10.870146	9.133839	10.866161	10.003985	9.996015	15
46	9.130781	10.869219	9.134784	10.865216	10.004002	9.995998	14
47	9.131706	10.868294	9.135726	10.864274	10.004020	9.995980	13
48	9.132630	10.867370	9.136667	10.863333	10.004037	9.995963	12
49	9.133551	10.866449	9.137605	10.862395	10.004054	9.995946	11
50	9.134470	10.865530	9.138542	10.861458	10.004072	9.995928	10
51	9.135387	10.864613	9.139476	10.860524	10.004089	9.995911	9
52	9.136303	10.863697	9.140409	10.859591	10.004106	9.995894	8
53	9.137216	10.862784	9.141340	10.858660	10.004124	9.995876	7
54	9.138128	10.861872	9.142269	10.857731	10.004141	9.995859	6
55	9.139037	10.860963	9.143196	10.856804	10.004159	9.995841	5
56	9.139944	10.860056	9.144121	10.855879	10.004177	9.995823	4
57	9.140850	10.859150	9.145044	10.854956	10.004194	9.995806	3
58	9.141754	10.858246	9.145966	10.854034	10.004212	9.995788	2
59	9.142655	10.857345	9.146885	10.853115	10.004230	9.995771	1
60	9.143555	10.856445	9.147803	10.852197	10.004247	9.995753	0
	Co.s. 82° Sine 172°	Secant 82°	Co.t. 82° Tan. 172°	Tangent 82°	Co. sec. 82°	Sine 82°	Min.

82 — Degrees — 172

82° Tan. 7°	0′	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′	55′
	17	17	17	17	17	16	16	16	16	16	16	15

A Table of Artificial Sines,

8 — Degrees — 98.

Min.	Sine 8°	Co. Sec. 8°	Tangent 8°	Co.t. 8° Tan. 98°	Secant 8°	Co.s. 8° Sine 98°	Min.
0	9.143555	10.856445	9.147803	10.852197	10.004247	9.995753	60
1	9.144453	10.855547	9.148718	10.851282	10.004265	9.995735	59
2	9.145349	10.854651	9.149632	10 850368	10.004283	9.995717	58
3	9.146243	10.853757	9.150544	10.849456	10.004301	9.995699	57
4	9.147136	10.852864	9.151454	10.848546	10.004319	9.995681	56
5	9.148026	10.851974	9.152363	10.847637	10.004336	9.995664	55
6	9.148915	10.851085	9.153269	10.846731	10.004354	9.995646	54
7	9.149802	10.850198	9.154174	10.845826	10.004372	9.995628	53
8	9.150686	10.849314	9.155077	10.844923	10.004390	9.995610	52
9	9.151569	10.848431	9.155978	10.844022	10.004409	9.995591	51
10	9.152451	10.847549	9.156877	10.843123	10.004427	9.995573	50
11	9.153330	10.846670	9.157775	10.842225	10.004445	9.995555	49
12	9.154208	10.845792	9.158671	10.841329	10.004463	9.995537	48
13	9.155083	10.844917	9.159565	10.840435	10.004481	9.995519	47
14	9.155957	10.844043	9.160457	10.839543	10.004499	9.995501	46
15	9.156830	10.843170	9.161347	10.838653	10.004518	9.995482	45
16	9.157700	10.842300	9.162236	10.837764	10.004536	9.995464	44
17	9.158569	10.841431	9.163123	10.836877	10.004554	9.995446	43
18	9 159435	10.840565	9.164008	10.835992	10.004573	9.995427	42
19	9.160301	10.839699	9.164892	10.835108	10.004591	9.995409	41
20	9.161164	10.838836	9.165774	10.834226	10.004610	9.995390	40
21	9.162025	10.837975	9.166654	10.833346	10.004628	9.995372	39
22	9.162885	10.837115	9.167532	10.832468	10.004647	9.995353	38
23	9.163743	10.836257	9.168409	10.831591	10.004666	9.995334	37
24	9.164600	10.835400	9.169284	10.830716	10.004684	9 995316	36
25	9.165454	10.834546	9.170157	10.829843	10.004703	9.995297	35
26	9.166307	10.833693	9.171029	10.828971	10.004722	9.995278	34
27	9.167159	10.832841	9.171899	10.828101	10.004740	9.995260	33
28	9.168008	10.831992	9.172767	10.827233	10.004759	9.995241	32
29	9.168856	10.831144	9.173634	10.826366	10.004778	9.995222	31
30	9.169702	10.830298	9.174499	10.825501	10.004797	9.995203	30
	Co.s. 81° Sine 171°	Secant 81°	Co.t. 81° Tan 171°	Tangent 81°	Co. Sec. 81°	Sine 81°	Min.

81 — Degrees — 171.

Sine 8°	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	14	70	141	211	282	352	422	493	563	634	703	773
81	0	2	3	5	6	8	9	11	12	14	15	17

8 — Degrees — 98.

Min.	Sine 8°	Co. Sec. 8°	Tangent 8°	Co.t. 8° Tan. 98°	Secant 8°	Co.s. 8° Sine 98°	Min.
30	9.169702	10.820398	9.174499	10.825501	10.004797	9.995203	30
31	9.170547	10.829453	9.175362	10.824638	10.004816	9.995184	29
32	9.171389	10.828611	9.176224	10.823776	10.004835	9.995165	28
33	9.172230	10.827770	9.177084	10.822916	10.004854	9.995146	27
34	9.173070	10.826930	9.177942	10.822058	10.004873	9.995127	26
35	9.173908	10.826092	9.178799	10.821201	10.004892	9.995108	25
36	9.174744	10.825256	9.179655	10.820345	10.004911	9.995089	24
37	9.175578	10.824422	9.180508	10.819492	10.004930	9.995070	23
38	9.176411	10.823589	9.181360	10.818640	10.004949	9.995051	22
39	9.177242	10.822758	9.182211	10.817789	10.004968	9.995032	21
40	9.178072	10.821928	9.183059	10.816941	10.004987	9.995013	20
41	9.178900	10.821100	9.183907	10.816093	10.005007	9.994993	19
42	9.179726	10.820274	9.184752	10.815248	10.005026	9.994974	18
43	9.180551	10.819449	9.185597	10.814403	10.005045	9.994955	17
44	9.181374	10.818626	9.186439	10.813561	10.005065	9.994935	16
45	9.182196	10.817804	9.187280	10.812720	10.005084	9.994916	15
46	9.183016	10.816984	9.188120	10.811880	10.005104	9.994896	14
47	9.183834	10.816166	9.188958	10.811042	10.005123	9.994877	13
48	9.184651	10.815349	9.189794	10.810206	10.005143	9.994857	12
49	9.185466	10.814534	9.190629	10.809371	10.005162	9.994838	11
50	9.186280	10.813720	9.191462	10.808538	10.005182	9.994818	10
51	9.187092	10.812908	9.192294	10.807706	10.005202	9.994798	9
52	9.187903	10.812097	9.193124	10.806876	10.005221	9.994779	8
53	9.188712	10.811288	9.193953	10.806047	10.005241	9.994759	7
54	9.189519	10.810481	9.194780	10.805220	10.005261	9.994739	6
55	9.190325	10.809675	9.195606	10.804394	10.005281	9.994719	5
56	9.191130	10.808870	9.196430	10.803570	10.005300	9.994700	4
57	9.191933	10.808067	9.197253	10.802747	10.005320	9.994680	3
58	9.192734	10.807266	9.198074	10.801926	10.005340	9.994660	2
59	9.193534	10.806466	9.198894	10.801106	10.005360	9.994640	1
60	9.194332	10.805668	9.199713	10.800287	10.005380	9.994620	0
	Co.s. 81° Sine 171°	Secant 81°	Co.t. 81° Tan 171°	Tangent 81°	Co. Sec. 81°	Sine 81°	Min.

81 — Degrees — 171.

81 Tan. 8°	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	14	72	144	216	288	360	432	504	576	648	720	792

A Table of Artificial Sines,

9 — Degrees — 99.

Min.	Sine 9°	Co. Sec. 9°	Tangent 9°	Co.t. 9° Tan. 99°	Secant 9°	Co.s. 9° Sine 9 9°	
0	9.194332	10.805668	9.199713	10.800287	10.005380	9.994620	60
1	9.195129	10.804871	9.200529	10.799471	10.005400	9.994600	59
2	9.195925	10.804075	9.201345	10.798655	10.005420	9.994580	58
3	9.196719	10.803281	9.202159	10.797841	10.005440	9.994560	57
4	9.197511	10.802489	9.202971	10.797029	10.005460	9.994540	56
5	9.198302	10.801698	9.203782	10.796218	10.005481	9.994519	55
6	9.199091	10.800909	9.204592	10.795408	10.005501	9.994499	54
7	9.199879	10.800121	9.205400	10.794600	10.005521	9.994479	53
8	9.200666	10.799334	9.206207	10.79379	10.005541	9.994459	52
9	9.201451	10.798549	9.207013	10.792987	10.005562	9.994438	51
10	9.202234	10.797766	9.207817	10.792183	10.005582	9.994418	50
11	9.203017	10.796983	9.208619	10.791381	10.005603	9.994397	49
12	9.203797	10.796203	9.219420	10.790580	10.005623	9.994377	48
13	9.204577	10.795423	9.210220	10.789780	10.005643	9.994357	47
14	9.205354	10.794646	9.211018	10.788982	10.005664	9.994336	46
15	9.206131	10.793869	9.211815	10.788185	10.005684	9.994316	45
16	9.206906	10.793094	9.212611	10.787389	10.005705	9.994295	44
17	9.207679	10.792321	9.213405	10.786595	10.005726	9.994274	43
18	9.208452	10.791548	9.214198	10.785802	10.005746	9.994254	42
19	9.209222	10.790778	9.214989	10.785011	10.005767	9.994233	41
20	9.209992	10.790008	9.215780	10.784220	10.005788	9.994212	40
21	9.210760	10.789240	9.216568	10.783432	10.005809	9.994191	39
22	9.211526	10.788474	9.217356	10.782644	10.005829	9.994171	38
23	9.212291	10.787709	9.218142	10.781858	10.005850	9.994150	37
24	9.213055	10.786945	9.218926	10.781074	10.005871	9.994129	36
25	9.213818	10.786182	9.219710	10.780290	10.005892	9.994108	35
26	9.214579	10.785421	9.220492	10.779508	10.005913	9.994087	34
27	9.215338	10.784662	9.221272	10.778728	10.005934	9.994066	33
28	9.216097	10.783903	9.222052	10.777948	10.005955	9.994045	32
29	9.216854	10.783146	9 222830	10.777170	10.005976	9.994024	31
30	9.217609	10.782391	9.223607	10.776393	10.005997	9.994003	30
	Co.s. 80° Sine 170°	Secant 80°	Co.t. 80° Tan. 170°	Tangent 80°	Co. Sec. 80°	Sine 80°	Min.

80 — Degrees — 170.

Sine 9°	1''	5''	10''	15''	20''	25''	30''	35''	40''	45''	50''	55''
80°	13	63	126	189	252	314	377	440	503	566	629	692
	0	2	3	5	7	9	10	12	14	16	17	19

9 — Degrees — 99.

Min.	Sine 9°	Co. Sec. 9°	Tangent 9°	Co.t. 9° Tan. 99°	Secant 9°	Co.s. 9° Sine 94°	Min.
30	9.217609	10.782391	9.223607	10.776393	10.005997	9.994003	30
31	9.218363	10.781637	9.224382	10.775618	10.006019	9.993981	29
32	9.219116	10.780884	9.225156	10.774844	10.006040	9.993960	28
33	9.219868	10.780132	9.225929	10.774071	10.006061	9.993939	27
34	9.220618	10.779382	9.226700	10.773300	10.006082	9.993918	26
35	9.221367	10.778633	9.227471	10.772529	10.006104	9.993896	25
36	9.222115	10.777885	9.228239	10.771761	10.006125	9.993875	24
37	9.222861	10.777139	9.229007	10.770993	10.006146	9.993854	23
38	9.223606	10.776394	9.229773	10.770227	10.006168	9.993832	22
39	9.224349	10.775651	9.230539	10.769461	10.006189	9.993811	21
40	9.225092	10.774908	9.231302	10.768698	10.006211	9.993789	20
41	9.225833	10.774167	9.232065	10.767935	10.006232	9.993768	19
42	9.226573	10.773427	9.232826	10.767174	10.006254	9.993746	18
43	9.227311	10.772689	9.233586	10.766414	10.006275	9.993725	17
44	9.228048	10.771952	9.234345	10.765655	10.006297	9.993703	16
45	9.228784	10.771216	9.235103	10.764897	10.006319	9.993681	15
46	9.229518	10.770482	9.235859	10.764141	10.006340	9.993660	14
47	9.230252	10.769748	9.236614	10.763386	10.006362	9.993638	13
48	9.230984	10.769016	9.237368	10.762632	10.006384	9.993616	12
49	9.231714	10.768286	9.238120	10.761880	10.006406	9.993594	11
50	9.232444	10.767556	9.238872	10.761128	10.006428	9.993572	10
51	9.233172	10.766828	9.239622	10.760378	10.006450	9.993550	9
52	9.233899	10.766101	9.240371	10.759629	10.006472	9.993528	8
53	9.234625	10.765375	9.241118	10.758882	10.006493	9.993507	7
54	9.235349	10.764651	9.241865	10.758135	10.006516	9.993484	6
55	9.236073	10.763927	9.242610	10.757390	10.006538	9.993462	5
56	9.236795	10.763205	9.243354	10.756646	10.006560	9.993440	4
57	9.237515	10.762485	9.244097	10.755903	10.006582	9.993418	3
58	9.238235	10.761765	9.244839	10.755161	10.006604	9.993396	2
59	9.238953	10.761047	9.245579	10.754421	10.006626	9.993374	1
60	9.239670	10.760330	9.246319	10.753681	10.006649	9.993351	0
	Co.s. 80° Sine 170°	Secant 80°	Co.t. 80° Tan. 170°	Tangent 80°	Co. Sec. 80°	Sine 80°	Min.

80 — Degrees — 170.

80° Tan. 9°	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	13	65	129	194	259	323	388	453	518	582	647	712

A Table of Artificial Sines,

10 — Degrees — 100.

Min.	Sine 10°	Co. Sec. 10°	Tangent 10°	Co.t 10° Tan. 100°	Secant 10°	Co.s. 10° Sine 100°	
0	9.239670	10.760330	9.246319	10.753681	10.006649	9.993351	60
1	9.240386	10.759614	9.247057	10.752943	10.006671	9.993329	59
2	9.241101	10.758899	9.247794	10.752206	10.006693	9.993307	58
3	9.241814	10.758186	9.248530	10.751470	10.006715	9.993285	57
4	9.242526	10.757974	9.249264	10.750736	10.006738	9.993262	56
5	9.243237	10.756763	9.249998	10.750002	10.006760	9.993240	55
6	9.243947	10.756053	9.250730	10.749270	10.006783	9.993217	54
7	9.244656	10.755344	9.251461	10.748539	10.006805	9.993195	53
8	9.245363	10.754637	9.252191	10.747809	10.006828	9.993172	52
9	9.246069	10.753931	9.252920	10.747080	10.006851	9.993149	51
10	9.246775	10.753225	9.253648	10.746352	10.006873	9.993127	50
11	9.247478	10.752522	9.254374	10.745626	10.006896	9.993104	49
12	9.248181	10.751819	9.255100	10.744900	10.006919	9.993081	48
13	9.248882	10.751117	9.255824	10.744176	10.006941	9.993059	47
14	9.249583	10.750417	9.256547	10.743453	10.006964	9.993036	46
15	9.250282	10.749718	9.257269	10.742731	10.006987	9.993013	45
16	9.250980	10.749020	9.257990	10.742010	10.007010	9.992990	44
17	9.251677	10.748323	9.258710	10.741290	10.007033	9.992967	43
18	9.252373	10.747627	9.259429	10.740571	10.007056	9.992944	42
19	9.253067	10.746933	9.260146	10.739854	10.007079	9.992921	41
20	9.253761	10.746239	9.260863	10.739137	10.007102	9.992898	40
21	9.254453	10.745547	9.261578	10.738422	10.007125	9.992875	39
22	9.255144	10.744856	9.262292	10.737708	10.007148	9.992852	38
23	9.255834	10.744166	9.263005	10.736995	10.007171	9.992829	37
24	9.256523	10.743477	9.263717	10.736283	10.007194	99.92806	36
25	9.257211	10.742789	9.264428	10.735572	10.007217	9.992783	35
26	9.257898	10.742102	9.265138	10.734862	10.007241	9.992759	34
27	9.258583	10.741417	9.265847	10.734153	10.007264	9.992736	33
28	9.259268	10.740732	9.266555	10.733445	10.007287	9.992713	32
29	9.259951	10.740049	9.267261	10.732739	10.007311	9.992689	31
30	9.260633	10.739367	9.267967	10.732033	10.007334	9.992666	30
	Co.s 79° Sine 169°	Secant 79°	Co.t 79° Tan. 169°	Tangent 79°	Co. sec. 79°	Sine 79°	Min.

79 — Degrees — 169.

Sine 10°	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
79°	11	57	114	170	227	284	341	398	454	511	568	624
	0	2	4	6	8	10	12	14	16	18	20	21

Tangents and Secants.

10 — Degrees — 100.

Min.	Sine 10°	Co. Sec. 10°	Tangent 10°	Co.t. 10° Tan. 100°	Secant 10°	Co.s. 10° Sine 100°	
30	9.260633	10.739367	9.267967	10.732031	10.007334	9.992666	30
31	9.261314	10.738686	9.268671	10.731329	10.007357	9.992643	29
32	9.261994	10.738006	9.269375	10.730625	10.007381	9.992619	28
33	9.262673	10.737327	9.270077	10.729923	10.007404	9.992596	27
34	9.263351	10.736649	9.270779	10.729221	10.007428	9.992572	26
35	9.264027	10.735973	9.271479	10.728521	10.007451	9.992549	25
36	9.264703	10.735297	9.272178	10.727822	10.007475	9.992525	24
37	9.265377	10.734623	9.272876	10.727124	10.007499	9.992501	23
38	9.266051	10.733949	9.273573	10.726427	10.007522	9.992478	22
39	9.266723	10.733277	9.274269	10.725731	10.007546	9.992454	21
40	9.267395	10.732605	9.274964	10.725036	10.007570	9.992430	20
41	9.268065	10.731935	9.275658	10.724342	10.007594	9.992406	19
42	9.268734	10.731266	9.276351	10.723649	10.007618	9.992382	18
43	9.269402	10.730598	9.277043	10.722957	10.007642	9.992358	17
44	9.270069	10.729931	9.277734	10 722266	10.007665	9.992335	16
45	9.270735	10.729265	9.278424	10.721576	10.007689	9.992311	15
46	9.271400	10.728600	9.279113	10.720887	10.007713	9.992287	14
47	9.272064	10.727936	9.279801	10.720199	10.007737	9.992263	13
48	9.272726	10.727274	9.280488	10.719512	10.007761	9.992239	12
49	9.273388	10.726612	9.281174	10.718826	10.007786	9.992214	11
50	9.274049	10.725951	9.281858	10.718142	10.007810	9.992190	10
51	9.274708	10.725292	9.282542	10.717458	10.007834	9.992166	9
52	9.275367	10.724633	9.283225	10.716775	10.007858	9.992142	8
53	9.276024	10.723976	9.283907	10.716093	10.007883	9.992117	7
54	9.276681	10.723319	9.284588	10.715412	10.007907	9.992093	6
55	9 277337	10.722663	9.285268	10.714732	10.007931	9.992069	5
55	9.277991	10.722009	9.285947	10.714053	10.007956	9.992044	4
57	9.278644	10.721356	9.286624	10.713376	10.007980	9.992020	3
58	9.279297	10.720703	9.287301	10.712699	10.008004	9.991996	2
59	9.279948	10.720052	9.287977	10.712023	10.008029	9.991971	1
60	9.280599	10.719401	9.288652	10.711348	10.008053	9.991947	0
	Co.s. 79° Sine 169°	Secant 79°	Co.t. 79° Tan 169°	Tangent 79°	Co. Sec. 79°	Sine 79°	Min.

79 — Degrees — 169.

79° Tan. 10	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	12	59	117	176	235	294	352	411	470	529	587	646

A Table of Artificial Sines,

11 — Degrees — 101.

Min.	Sine 11°	Co. Sec. 11°	Tangent 11°	Co.t. 11° Tan. 101°	Secant 11°	Co.s. 11° Sine 101°	
0	9.280599	10.719401	9.288652	10.711348	10.008053	9.991947	60
1	9.281248	10.718752	9.289326	10.710674	10.008078	9.991922	59
2	9.281897	10.718103	9.289999	10.710001	10.008103	9.991897	58
3	9.282544	10.717456	9.290671	10.709329	10.008127	9.991873	57
4	9.283190	10.716810	9.291342	10.708658	10.008152	9.991848	56
5	9.283836	10.716164	9.292013	10.707987	10.008177	9.991823	55
6	9.284480	10.715520	9.292682	10.707318	10.008201	9.991799	54
7	9.285124	10.714876	9.293350	10.706650	10.008226	9.991774	53
8	9.285766	10.714234	9.294017	10.705983	10.008251	9.991749	52
9	9.286408	10.713592	9.294684	10.705316	10.008276	9.991724	51
10	9.287048	10.712952	9.295349	10.704651	10.008301	9.991699	50
11	9.287687	10.712313	9.296013	10.703987	10.008326	9.991674	49
12	9.288326	10.711674	9.296677	10.703323	10.008351	9.991649	48
13	9.288964	10.711036	9.297339	10.702661	10.008376	9.991624	47
14	9.289600	10.710400	9.298001	10.701999	10.008401	9.991599	46
15	9.290236	10.709764	9.298662	10.701338	10.008426	9.991574	45
16	9.290870	10.709130	9.299322	10.700678	10.008451	9.991549	44
17	9.291504	10.708496	9.299980	10.700020	10.008476	9.991524	43
18	9.292137	10.707863	9.300638	10.699362	10.008502	9.991498	42
19	9.292768	10.707232	9.301295	10.698705	10.008527	9.991473	41
20	9.293399	10.706601	9.301951	10.698049	10.008552	9.991448	40
21	9.294029	10.705971	9.302607	10.697393	10.008577	9.991423	39
22	9.294658	10.705342	9.303261	10.696739	10.008603	9.991397	38
23	9.295286	10.704714	9.303914	10.696086	10.008628	9.991372	37
24	9.295913	10.704087	9.304567	10.695433	10.008654	9.991346	36
25	9.296539	10.703461	9.305218	10.694782	10.008679	9.991321	35
26	9.297164	10.702836	9.305869	10.694131	10.008705	9.991295	34
27	9.297788	10.702212	9.306519	10.693481	10.008730	9.991270	33
28	9.298412	10.701588	9.307168	10.692832	10.008756	9.991244	32
29	9.299034	10.700966	9.307815	10.692185	10.008782	9.991218	31
30	9.299655	10.700345	9.308463	10.691537	10.008807	9.991193	30
	Co.s. 78° Sine 168°	Secant 78°	Co.t. 78° Tan 168°	Tangent 78°	Co. Sec. 78°	Sine 78°	Min.

78 — Degrees — 168.

78° Sine 11'	1"	5"	10"	15"	20"	25"	30"	35"	40"	45"	50"	55"
	10	52	103	155	207	259	310	362	414	466	517	569
	0	2	4	6	8	11	13	15	17	19	22	24

11 — Degrees — 101.

Min.	Sine 11°	Co. Sec. 11°	Tangent 11°	Co.t. 11° Tan. 101°	Secant 11°	Co.s. 11° Sine 101°	Min.
30	9.299655	10.700345	9.308463	10.691537	10.008807	9.991193	30
31	9.300276	10.699724	9.309109	10.690891	10.008833	9.991167	29
32	9.300895	10.699105	9.309754	10.690246	10.008859	9.991141	28
33	9.301514	10.698486	9.310398	10.689602	10.008885	9.991115	27
34	9.302132	10.697868	9.311042	10.688958	10.008910	9.991090	26
35	9.302748	10.697252	9.311685	10.688315	10.008936	9.991064	25
36	9.303364	10.696636	9.312327	10.687673	10.008962	9.991038	24
37	9.303979	10.696021	9.312967	10.687033	10.008988	9.991012	23
38	9.304593	10.695407	9.313608	10.686392	10.009014	9.990986	22
39	9.305207	10.694793	9.314247	10.685753	10.009040	9.990960	21
40	9.305819	10.694181	9.314885	10.685115	10.009066	9.990934	20
41	9.306430	10.693570	9.315523	10.68447	10.009092	9.99090	19
42	9.307041	10.692959	9.316159	10.683841	10.009118	9.990882	18
43	9.307650	10.692350	9.316795	10.683205	10.009145	9.990855	17
44	9.308259	10.691741	9.317430	10.682570	10.009171	9.990829	16
45	9.308867	10.691133	9.318064	10.681936	10.009197	9.990803	15
46	9.309474	10.690526	9.318697	10.681303	10.009223	9.990777	14
47	9.310080	10.689920	9.319329	10.680671	10.009250	9.990750	13
48	9.310685	10.689315	9.319961	10.680039	10.009276	9.990724	12
49	9.311289	10.688711	9.320592	10.679408	10.009303	9.990697	11
50	9.311893	10.688107	9.321222	10.678778	10.009329	9.990671	10
51	9.312495	10.687505	9.321851	10.678149	10.009356	9.990644	9
52	9.313097	10.686903	9.322479	10.677521	10.009382	9.990618	8
53	9.313698	10.686302	9.323106	10.676894	10.009409	9.990591	7
54	9.314297	10.685703	9.323733	10.676267	10.009435	9.990565	6
55	9.314896	10.685104	9.324358	10.675642	10.009462	9.990538	5
56	9.315495	10.684505	9.324983	10.675017	10.009489	9.990511	4
57	9.316092	10.683908	9.325607	10.674393	10.009515	9.990485	3
58	9.316689	10.683311	9.326231	10.673769	10.009542	9.990458	2
59	9.317284	10.682716	9.326853	10.673147	10.009569	9.990431	1
60	9.317879	10.682121	9.327475	10.672525	10.009595	9.990404	0
	Co.s. 78° Sine 168°	Secant 78°	Co.t. 78° Tan. 168°	Tangent 78°	Co. sec. 78°	Sine 78°	Min.

11° 78 — Degrees — 168

78° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	11	55	109	164	219	273	328	383	337	492	546	601

A Table of Artificial Sines,

12 — Degrees — 102.

Min.	Sine 12°	Co. Sec. 12°	Tangent 12°	Co.t. 12° Tan. 102°	Secant 12°	Co.s. 12° Sine 102°	Min.
0	9.317879	10.682121	9.327474	10.672526	10.009596	9.990404	60
1	9.318473	10.681527	9.328095	10.671905	10.009623	9.990377	59
2	9.319066	10.680934	9.328715	10 671285	10.009649	9.990351	58
3	9.319658	10.680342	9.329334	10.670666	10.009676	9.990324	57
4	9.320249	10.679751	9.329953	10.670047	10.009703	9.990297	56
5	9.320840	10.679160	9.330570	10.669430	10.009730	9.990270	55
6	9.321430	10.678570	9.331187	10.668813	10.009757	9.990243	54
7	9.322019	10.677981	9.331803	10.668197	10.009785	9.990215	53
8	9.322607	10.677393	9.332418	10.667582	10.009812	9.990188	52
9	9.323194	10.676806	9.333033	10.666967	10.009839	9.990161	51
10	9.323780	10.676220	9.333646	10.666354	10.009866	9.990134	50
11	9.324366	10.675634	9.334259	10.665741	10.009893	9.990107	49
12	9.324950	10.675050	9.334871	10.665129	10.009921	9.990079	48
13	9.325534	10.674466	9.335482	10.664518	10.009948	9.990052	47
14	9.326117	10.673883	9.336093	10.663907	10.009975	9.990025	46
15	9.326700	10.673300	9.336702	10.663298	10.010003	9.989997	45
16	9.327281	10.672719	9.337311	10.662689	10.010030	9.989970	44
17	9.327862	10.672138	9.337919	10.662081	10.010058	9.989942	43
18	9 328442	10.671558	9.338527	10.661473	10.010085	9.989915	42
19	9.329021	10.670979	9.339133	10.660867	10.010113	9.989887	41
20	9.329599	10.670401	9.339739	10.660261	10.010140	9.989860	40
21	9.330176	10.669824	9.340344	10.659656	10.010168	9.989832	39
22	9.330753	10.669247	9.340948	10.659052	10.010196	9.989804	38
23	9.331328	10.668672	9.341552	10.658448	10.010223	9.989777	37
24	9.331903	10.668097	9.342155	10.657845	10.010251	9.989749	36
25	9.332478	10.667522	9.342757	10.657243	10.010279	9.989721	35
26	9.333051	10.666949	9.343358	10.656642	10.010307	9.989693	34
27	9.333624	10.666376	9.343958	10.656042	10.010335	9.989665	33
28	9.334195	10.665805	9.344558	10.655442	10.010363	9.989637	32
29	9.334766	10.665234	9.345157	10.654843	10.010391	9.989609	31
30	9.335337	10.664663	9.345755	10.654245	10.010418	9.989582	30
	Co.s. 77° Sine 167°	Secant 77°	Co.t. 77° Tañ 167°	Tangent 77°	Co. Sec. 77°	Sine 77°	Min.

12° 77 — Degrees — 167.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
77°	9	47	95	142	190	237	285	332	380	427	474	522
	0	2	5	7	9	12	14	16	19	21	23	26

12 — Degrees — 102.

Min.	Sine 12°	Co. Sec. 12°	Tangent 12°	Co.t. 12° Tan. 102°	Secant 12°	Co.s. 12° Sine 102°	
30	9.335337	10.664663	9.345755	10.654245	10.010418	9.989582	30
31	9.335906	10.664094	9.346353	10.653647	10.010447	9.989553	29
32	9.336475	10.663525	9.346949	10.653051	10.010475	9.989525	28
33	9.337043	10.662957	9.347545	10.652455	10.010503	9.989497	27
34	9.337610	10.662390	9.348141	10.651859	10.010531	9.989469	26
35	9.338176	10.661824	9.348735	10.651265	10.010559	9.989441	25
36	9.338742	10.661258	9.349329	10.650671	10.010587	9.989413	24
37	9.339306	10.660694	9.349922	10.650078	10.010616	9.989384	23
38	9.339871	10.660129	9.350514	10.649486	10.010644	9.989356	22
39	9.340434	10.659566	9.351106	10.648894	10.010672	9.989328	21
40	9.340996	10.659004	9.351697	10.648303	10 010700	9.989300	20
41	9.341558	10.658442	9.352287	10.647713	10.010729	9.989271	19
42	9.342119	10.657880	9.352876	10.647124	10.010757	9.989243	18
43	9.342679	10.657321	9.353465	10.646535	10.010786	9.989214	17
44	9.343239	10.656761	9 354053	10.645947	10010814	9.989186	16
45	9.343797	10.656203	9.354640	10.645360	10.010843	9.989157	15
46	9.344355	10.655645	9.355227	10.644773	10.010872	9.989128	14
47	9.344912	10.655088	9.355813	10.644187	10.010900	9.989100	13
48	9.345469	10.654531	9.356398	10.643602	10.010929	9.989071	12
49	9.346024	10.653976	9.356982	10.643018	10.010958	9.989042	11
50	9.346579	10.653421	9.357566	10.642434	10.010986	9.986014	10
51	9.347134	10.652866	9.358149	10.641851	10.011015	9.988985	9
52	9.347687	10.652313	9.358731	10.641269	10.011044	9.988956	8
53	9.348240	10.651760	9.359313	10.640687	10.011073	9.988927	7
54	9.348792	10.651208	9.359893	10.640107	10.011102	9.988898	6
55	9.349343	10.650657	9.360474	10.639526	10.011131	9.988869	5
56	9.349893	10.650107	9.361053	10.638947	10.011160	9.988840	4
57	9.350443	10.649557	9.361632	10.638368	10.011189	9.988811	3
58	9.350992	10.649008	9.362210	10.637790	10.011218	9.988782	2
59	9.351540	10.648460	9.362787	10.637213	10.011247	9.988753	1
60	9.352088	10.647912	9.363364	10.636636	10.011276	9.988724	0
	Co.s. 77° Sine 167°	Secant 77°	Co.t. 77° Tan 167°	Tangent 77°	Co. Sec. 77°	Sine 77°	Min.

12°

77 — Degrees — 167.

77° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	10	50	100	150	199	249	299	349	399	449	498	548

A Table of Artificial Sines,

13 — Degrees — 103.

Min.	Sine 13°	Co. Sec. 13°	Tangent 13°	Co.t. 13° Tan. 103°	Secant 13°	Co.s. 13° Sine 103°	
0	9.352088	10.647912	9.363364	10.636636	10.011276	9.988724	60
1	9.352635	10.647365	9.363940	10.636060	10.011305	9.988695	59
2	9.353181	10.646819	9.364515	10.635485	10.011334	9.988666	58
3	9.353726	10.646274	9.365090	10.634910	10.011364	9.988636	57
4	9.354271	10.645729	9.365664	10.634336	10.011393	9.988607	56
5	9.354815	10.645185	9.366237	10.633763	10.011422	9.988578	55
6	9.355358	10.644642	9.366810	10.633190	10.011452	9.988548	54
7	9.355901	10.644099	9.367382	10.632618	10.011481	9.988519	53
8	9.356443	10.643557	9.367953	10.632046	10.011511	9.988489	52
9	9.356984	10.643016	9.368524	10.631477	10.011540	9.988460	51
10	9.357524	10.642476	9.369094	10.630906	10.011570	9.988430	50
11	9.358064	10.641936	9.369663	10.630337	10.011599	9.988401	49
12	9.358603	10.641397	9.370232	10.629768	10.011629	9.988371	48
13	9.359141	10.640859	9.370799	10.629201	10.011658	9.988342	47
14	9.359678	10.640322	9.371367	10.628633	10.011688	9.988312	46
15	9.360215	10.639785	9.371933	10.628067	10.011718	9.988282	45
16	9.360752	10.639249	9.372499	10.627501	10.011748	9.988252	44
17	9.361287	10.638713	9.373064	10.626936	10.011777	9.988223	43
18	9.361822	10.638178	9.373629	10.626371	10.011807	9.988193	42
19	9.362356	10.637644	9.374193	10.625807	10.011837	9.988163	41
20	9.362889	10.637111	9.374756	10.625244	10.011867	9.988133	40
21	9.363422	10.636578	9.375319	10.624681	10.011897	9.988103	39
22	9.363954	10.636046	9.375881	10.624119	10.011927	9.988073	38
23	9.364485	10.635515	9.376442	10.623558	10.011957	9.988043	37
24	9.365016	10.634984	9.377003	10.622997	10.011987	9.988013	36
25	9.365546	10.634454	9.377563	10.622437	10.012017	9.987983	35
26	9.366075	10.633925	9.378123	10.621878	10.012048	9.987953	34
27	9.366604	10.633396	9.378681	10.621319	10.012078	9.987922	33
28	9.367131	10.632869	9.379239	10.620761	10.012108	9.987892	32
29	9.367659	10.632341	9.379797	10.620203	10.012138	9.987862	31
30	9.368185	10.631815	9.380354	10.619646	10.012168	9.987832	30
	Co.s. 76° Sine 166°	Secant 76°	Co.t. 76° Tan 166°	Tangent 76°	Co. Sec. 76°	Sine 76°	Min.

13° — 76 — Degrees — 166.

76°	Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
		9	44	88	131	175	219	263	307	350	393	436	480
		1	3	5	7	10	12	15	17	20	22	25	27

13 — Degrees — 103.

Min.	Sine 13°	Co. Sec. 13°	Tangent 13°	Co.t 13° Tan. 103°	Secant 13°	Co.s. 13° Sine 103°	
30	9 368185	10.631815	9.380354	10.619646	10.012168	9.9 832	30
31	9.368711	10.631289	9.380910	10.619090	10 012199	9.987801	29
32	9.369236	10.630764	9.381466	10 618534	10.012229	9.987771	28
33	9.369761	10.630239	9 382020	10.61798e	10.012260	9.987740	27
34	9. 70285	10.62971:	9.382575	10.617425	10.012290	9.987 10	26
35	9.370808	10.629192	9.383129	10.616871	10.012321	9.987679	25
36	9.371330	10.628670	9.383682	10.616318	10.012351	9.987649	24
37	9.371852	10.628148	9.384234	10.615766	10.012382	9.987618	23
38	9.372373	10.627627	9.384786	10.615214	10.012412	9.987588	22
39	9.372894	10.627106	9.385337	10.614663	10.012443	9.987557	21
40	9.373414	10.626586	9.385888	10.614112	10.012474	9.987526	20
41	9.373 33	10.626067	9.386438	10.613562	10.012505	9.987495	19
42	9.374452	10.625548	9.38698	10.613013	10.012535	9.987465	18
43	9.374970	0.625030	9.387536	10.612464	10.012566	9.987434	17
44	9.375487	10.624513	9.388084	10.611916	10.012597	9.987403	16
45	9.376003	10.623997	9.388631	10.611369	10.0 2628	9.987372	15
46	9.376519	10.623481	9.389178	10.610822	10.012659	9.987341	14
47	9.377035	10.622965	9.389724	10.610276	10.012690	9.987310	13
48	9.377549	10.622451	9.390270	10.609730	10.012721	9.987279	12
49	.378063	10.621937	9.390815	10.609185	10.012752	.987248	11
50	9.378577	10.621423	9.391360	10.608640	10.012783	.987217	10
51	9.379089	10.620911	9.391903	10.608097	10.012814	9.987186	9
52	9.3 9601	10.620399	9.392447	10.607553	10.012845	9.987155	8
53	9.380113	10.619887	9.392989	10.607011	10.012876	9.987124	7
54	9. 80624	10.619376	9.393531	10.606469	10.012908	9.987092	6
55	9.381134	10.618866	9.394 73	10.605927	10.012939	9.987061	5
56	9.381643	10.618357	9.394614	10.605386	10.012970	9.987030	4
57	9.382152	10.617848	9.395154	10.604846	10.013002	9.986998	3
58	9.382661	10.617339	9.395694	10.604306	10.013033	9.986967	2
59	9.383168	10.616832	9.396233	10.603767	10.013064	9.986936	1
60	9.383675	10.616325	9.396771	10.603229	10.013096	9.986904	0
	Co.s 76° Sine 166°	Secant 76°	Co.t 76° Tan. 166°	Tangent 76°	Co. sec. 76°	Sine 76°	Min.

13°

76 — Degrees — 166.

76° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	9	46	93	139	186	232	278	325	371	418	464	510

A Table of Artificial Sines,

14 — Degrees — 104.

Min.	Sine 14°	Co. Sec. 14°	Tangent 14°	Co.t. 14° Tan. 104°	Secant 14°	Co.s. 14° Sine 104°	
0	9.383675	10.616325	9.396771	10.603229	10.013096	9.986904	60
1	9.384181	10.615819	9.397309	10.602691	10.013127	9.986873	59
2	9.384687	10.615313	9.397846	10.602154	10.013159	9.986841	58
3	9.385192	10.614808	9.398383	10.601617	10.013191	9.986809	57
4	9.385697	10.614303	9.398919	10.601081	10.013222	9.986778	56
5	9.386201	10.613799	9.399455	10.600545	10.013254	9.986746	55
6	9.386704	10.613296	9.399990	10.600010	10.013286	9.986714	54
7	9.387207	10.612793	9.400524	10.599476	10.013317	9.986683	53
8	9.387709	10.612291	9.401058	10.598942	10.013349	9.986651	52
9	9.388210	10.611790	9.401591	10.598405	10.013381	9.986619	51
10	9.388711	10.611289	9.402124	10.597876	10.013413	9.986587	50
11	9.389211	10.610789	9.402656	10.597344	10.013445	9.986555	49
12	9.389711	10.610289	9.403187	10.596813	10.013477	9.986523	48
13	9.390210	10.609790	9.403718	10.596282	10.013509	9.986491	47
14	9.390708	10.609292	9.404249	10.595751	10.013541	9.986459	46
15	9.391206	10.608794	9.404778	10.595222	10.013573	9.986427	45
16	9.391703	10.608297	9.405308	10.594692	10.013605	9.986395	44
17	9.392199	10.607801	9.405836	10.594164	10.013637	9.986363	43
18	9.392695	10.607305	9.406364	10.593636	10.013669	9.986331	42
19	9.393190	10.606810	9.406892	10.593108	10.013701	9.986299	41
20	9.393685	10.606315	9.407419	10.592581	10.013734	9.986266	40
21	9.394179	10.605821	9.407945	10.592055	10.013766	9.986234	39
22	9.394673	10.605327	9.408471	10.591529	10.013798	9.986202	38
23	9.395166	10.604834	9.408997	10.591003	10.013831	9.986169	37
24	9.395658	10.604342	9.409521	10.590479	10.013863	9.986137	36
25	9.396150	10.603850	9.410045	10.589955	10.013896	9.986104	35
26	9.396641	10.603359	9.410569	10.589431	10.013928	9.986072	34
27	9.397132	10.602868	9.411092	10.588908	10.013961	9.986039	33
28	9.397621	10.602379	9.411615	10.58838	10.013993	9.986007	32
29	9.398111	10.601889	9.412137	10.587863	10.014026	9.985974	31
30	9.398600	10.601400	9.412658	10.587342	10.014058	9.985942	30
	Co.s. 75° Sine 165°	Secant 75°	Co.t. 75° Tan 165°	Tangent 75°	Co. Sec. 75°	Sine 75°	Min.

14°

76 — Degrees — 165.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	8	41	81	122	163	203	244	285	326	366	407	448
75°	1	3	5	8	11	14	16	19	22	25	27	30

14 — Degrees — 104.

Min.	Sine 14°	Co. Sec. 14°	Tangent 14°	Co.t. 14° Tan. 104	Secant 14°	Co.s. 14° Sine 104°	Min.
30	9.398600	10.601400	9.412658	10.587342	10.014058	9.985942	30
31	9.399088	10.600912	9.413179	10.586821	10.014091	9.985909	29
32	9.399575	10.600425	9.413699	10.586301	10.014124	9.985876	28
33	9.400062	10.599938	9.414219	10.585781	10.014157	9.985843	27
34	9 400549	10.599451	9.414738	10.585262	10.014189	9.985811	26
35	9.401035	10.598965	9.415257	10.584743	10.014222	9.985778	25
36	9.401520	10.598480	9.415775	10.584225	10.014255	9.985745	24
37	9.402005	10.597995	9.416293	10.583707	10.014288	9.985712	23
38	9.402489	10.597511	9.416810	10.583190	10.014321	9.985679	22
39	9.402972	10.597028	9.417326	10.582674	10.014354	9.985646	21
40	9.403455	10.596545	9.417842	10.582158	10.014387	9.985613	20
41	9.403938	10.596062	9.418358	10.581642	10.014420	9.985580	19
42	9.404420	10.595580	9.418873	10.581127	10.014453	9.985547	18
43	9.404901	10.595099	9.419387	10.580613	10.014487	9.985513	17
44	9.405382	10.594618	9.419901	10.580099	10.014520	9.985480	16
45	9.405862	10.594138	9.420415	10.579585	10.014553	9.985447	15
46	9.406341	10.593659	9.420927	10.579073	10.014586	9.985414	14
47	9.406820	10.593180	9.421440	10.578560	10.014620	9.985380	13
48	9.407299	10.592701	9.421952	10.578048	10.014653	9.985347	12
49	9.407777	10.592223	9.422463	10.577537	10.014686	9.985314	11
50	9.408254	10.591746	9.422974	10.577026	10.014720	9.985280	10
51	9.408731	10.591269	9.423484	10.576516	10.014753	9.985247	9
52	9.409207	10.590793	9.423993	10.576007	10.014787	9.985213	8
53	9.409682	10.590318	9.424503	10.575497	10.014820	9.985180	7
54	9.410157	10.589843	9.425011	10.574989	10.014854	9.985146	6
55	9.410632	10.589368	9.425519	10.574481	10.014888	9.985112	5
56	9.411106	10.588894	9.426027	10.573973	10.014921	9.985079	4
57	9.411579	10.588421	9.426534	10.573466	10.014955	9.985045	3
58	9.412052	10.587948	9.427041	10.572959	10.014989	9.985011	2
59	9.412524	10.587476	9.427547	10.572453	10.015022	9.984978	1
60	9.412996	10.587004	9.428052	10.571948	10.015056	9.984944	0
	Co.s. 75° Sine 165°	Secant 75°	Co.t. 75° Tan. 165°	Tangent 75°	Co. Sec. 75°	Sine 75°	Min.

14° — 75 — Degrees — 165.

75° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	9	43	87	130	174	217	260	304	347	391	434	477

A Table of Artificial Sines,

15 — Degrees — 105.

Min.	Sine 15°	Co. Sec. 15°	Tangent 15°	Co.t. 15° Tan. 105°	Secant 15°	Co.s. 15° Sine 105°	
0	9.412996	10.587004	9.428052	10.571948	10.015056	9.984944	60
1	9.413467	10.586533	9.428557	10 57 443	10.0 5090	9.984910	59
2	9.413938	10.586062	9.429062	10.570938	10.015124	9.984876	8
3	9.414408	10.585592	9.429566	10.570434	10.01515[illegible]	9.984842	57
4	9.414878	10.585122	9.430070	10.569930	10.0151[illegible]	9.984808	56
5	9.415347	10.584653	9.430573	10.569427	10.015226	9.984774	55
6	9.415815	10.584185	9.43 075	10.568925	10.01526[illegible]	9.984740	54
7	9.416283	10.583717	9.431577	10.568423	10.015294	9.9847[illegible]6	53
8	9.416751	10.[illegible]83249	9.432079	10.567921	10.015328	9.[illegible]84672	52
9	9.417217	10.582783	9.432580	10.567420	10.015363	9.984637	51
10	9.417684	10.582316	9.433080	10.566920	10.015397	9.984603	50
11	9.418149	10.581851	9.433580	10.566420	10.015431	9.984569	49
12	9.418615	10.581385	9.434080	10.565920	10.015465	9.984535	48
13	9.419079	10.580921	9.434579	10.565421	10.015500	9.984500	47
14	9.419544	10.580456	9.435078	10.564922	10.015534	9.984466	46
15	9.420007	10.579993	9.435576	10.564424	10.015568	9.984432	45
16	9.420470	10.579530	9.436073	10.563927	10.015603	9.984397	44
17	9.420933	10.579067	9.436570	10.563430	10.015637	9.984363	43
18	9.421395	10.578605	9.437067	10.562933	10.015672	9.984328	42
19	9.421857	10.578143	9 437563	10.562437	10.015707	9.984293	41
20	9.422318	10.577682	9.438059	10.561941	10.015741	9.984259	40
21	9.422778	10.577222	9.438554	10.561446	10 015776	9.984224	39
22	9.423238	10.57676[illegible]	9.439048	10.560952	10.015810	9.984190	38
23	9.423697	10.576303	9.439543	10.560457	10.015845	9.984155	37
24	9.42415[illegible]	10.575844	9.44003[illegible]	10.559964	10.01588[illegible]	9.984120	36
25	9.424615	10.575385	9.440529	10.559471	10.015915	9.984085	35
26	9.425073	10.574927	9.441022	10.558978	10.015950	9.984030	34
27	9.425530	10.57447[illegible]	9.441514	10.558486	10.015985	9.984015	33
28	9.425987	10.574013	9.442006	10.557994	10.016019	9.983981	32
29	9.426443	10.573557	9 442497	10.557503	10.016054	9.983946	31
30	9.426899	10.573101	9.442988	10.557012	10.016089	9.983911	30
	Co.s. 74° Sine 164°	Secant 74°	Co.t. 74° Tan. 164°	Tangent 74°	Co. Sec. 74°	Sine 74°	Min.

15° 74 — Degrees — 164.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
74°	8	38	76	114	152	190	228	266	304	342	379	417
	1	3	6	9	12	14	17	20	23	26	29	32

15 — Degrees — 105.

Min.	Sine 15°	Co. Sec. 15°	Tangent 15°	Co.t 15° Tan. 105°	Secant 15°	Co.s. 15° Sine 105°	
30	9.426899	10.573101	9.442988	10.557012	10.016089	9.983911	30
31	9.427354	10.572646	9.443479	10.556521	10.016125	9.983875	29
32	9.427809	10.572191	9.443968	10 556032	10.016160	9.983840	28
33	9.428263	10.571737	9.444458	10.555542	10.016195	9.983805	27
34	9.428717	10.571283	9.444947	10.555053	10.016230	9.983770	26
35	9.429170	10.570830	9.445435	10.554565	10.016265	9.983735	25
36	9.429623	10.570377	9.445923	10.554077	10.016300	9.983700	24
37	9.430075	10.569925	9.446411	10.553589	10.016336	9.983664	23
38	9.430527	10.569473	9.446898	10.553102	10.016371	9.983629	22
39	9.430978	10.569022	9.447384	10.552616	10.016406	9.983594	21
40	9.431429	10.568571	9.447870	10.552130	10.016442	9.983558	20
41	9.431879	10.568121	9.448356	10.551644	10.016477	9.983523	19
42	9.432329	10.567671	9.448841	10.551159	10.016513	9.983487	18
43	9.432778	10.567222	9.449326	10.550674	10.016548	9.983452	17
44	9.433226	10.566774	9.449810	10.550190	10.016584	9.983416	16
45	9.433675	10.566325	9.450294	10.549706	10.016620	9.983380	15
46	9.434122	10.565878	9.450777	10.549223	10.016655	9.983345	14
47	9.434569	10.565431	9.451260	10.548740	10.016691	9.983309	13
48	9.435016	10.564984	9.451743	10.548257	10.016727	9.983273	12
49	9.435462	10.564538	9.452225	10.547775	10.016762	9.983238	11
50	9.435908	10.564092	9.452706	10.547294	10.016798	9.983202	10
51	9.436353	10.563647	9.453187	10.546813	10.016834	9.983166	9
52	9.436798	10.563202	9.453668	10.546332	10.016870	9.983130	8
53	9.437242	10.562758	9.454148	10.545852	10.016906	9.983094	7
54	9.437686	10.562314	9.454628	10.545372	10.016942	9.983058	6
55	9.438129	10.561871	9.455107	10.544893	10.016978	9.983022	5
56	9.438572	10.561428	9.455586	10.544414	10.017014	9.982986	4
57	9.439014	10.560986	9.456064	10.543936	10.017050	9.982950	3
58	9.439456	10.560544	9.456542	10.543458	10.017086	9.982914	2
59	9.439897	10.560103	9.457019	10.542981	10.017122	9.982878	1
60	9.440338	10.559662	9.457496	10.542504	10.017158	9.982842	0
	Co.s 74° Sine 164°	Secant 74°	Co.t 74° Tan. 164°	Tangent 74°	Co. sec. 74°	Sine 74°	Min.

15° 74 — Degrees — 164.

74° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	8	41	82	123	164	204	245	286	327	368	409	450

A Table of Artificial Sines,

16 — Degrees — 106.

Min.	Sine 16°	Co. Sec. 16°	Tangent 16°	Co.t.16° Tan. 106°	Secant 16°	Co.s. 16° Sine 106°	
0	9.440338	10.559662	9.457496	10.542504	10.017158	9.982842	60
1	9.440778	10.559222	9.457973	10.542027	10.017195	9.982805	59
2	9.441218	10.558782	9.458449	10.541551	10.017231	9.982769	58
3	9.441658	10.558342	9.458925	10.541075	10.017267	9.982733	57
4	9.442096	10.557904	9.459400	10.540600	10.017304	9.982696	56
5	9.442535	10.557465	9.459875	10.540125	10.017340	9.982660	55
6	9.442973	10.557027	9.460349	10.539651	10.017376	9.982624	54
7	9.443410	10.556590	9.460823	10.539177	10.017413	9.982587	53
8	9.443847	10.556153	9.461297	10.538703	10.017449	9.982551	52
9	9.444284	10.555716	9.461770	10.538230	10.017486	9.982514	51
10	9.444720	10.555280	9.462242	10.537758	10.017523	9.982477	50
11	9.445155	10.554845	9.462714	10.537286	10.017559	9.982441	49
12	9.445590	10.554410	9.463186	10.536814	10.017596	9.982404	48
13	9.446025	10.553975	9.463658	10.536342	10.017633	9.982367	47
14	9.446459	10.553541	9.464128	10.535872	10.017669	9.982331	46
15	9.446893	10.553107	9.464599	10.535401	10.017706	9.982294	45
16	9.447326	10.552674	9.465069	10.534931	10.017743	9.982257	44
17	9.447759	10.552241	9.465539	10.534461	10.017780	9.982220	43
18	9.448191	10.551809	9.466008	10.533992	10.017817	9.982183	42
19	9.448623	10.551377	9.466476	10.533524	10.017854	9.982146	41
20	9.449054	10.550946	9.466945	10.533055	10.017891	9.982109	40
21	9.449485	10.550515	9.467413	10.532587	10.017928	9.982072	39
22	9.449915	10.550085	9.467880	10.532120	10.017965	9.982035	38
23	9.450345	10.549655	9.468347	10.531653	10.018002	9.981998	37
24	9.450775	10.549225	9.468814	10.531186	10.018039	9.981961	36
25	9.451204	10.548796	9.469280	10.530720	10.018076	9.981924	35
26	9.451632	10.548368	9.469746	10.530254	10.018114	9.981886	34
27	9.452060	10.547940	9.470211	10.529789	10.018151	9.981849	33
28	9.452488	10.547512	9.470676	10.529324	10.018188	9.981812	32
29	9.452915	10.547085	9.471141	10.528859	10.018226	9.981774	31
30	9.453342	10.546658	9.471605	10.528395	10.018263	9.981737	30
	Co.s. 73° Sine 163°	Secant 73°	Co.t. 73° Tan 163°	Tangent 73°	Co. Sec. 73°	Sine 73°	Min.

16°

73 — Degrees — 163.

73° Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55′
	7	36	71	107	142	178	213	249	284	320	355	391
	1	3	6	9	13	16	19	22	25	28	31	25

16 — Degrees — 106.

Min.	Sine 16°	Co. Sec. 16°	Tangent 14°	Co.t. 16° Tan. 106°	Secant 18°	Co.s. 16° Sine 106°	
30	9.453342	10.546658	9.471605	10.528395	10.018263	9.981737	30
31	9.453768	10.546232	9.472068	10.527932	10.018301	9.981699	29
32	9.454194	10.545806	9.472532	10.527468	10.018338	9.981662	28
33	9.454619	10.545381	9.472995	10.527005	10.018375	9.981625	27
34	9.455044	10.544956	9.473456	10.526543	10.018413	9.981587	26
35	9.455469	10.544531	9.473919	10.526081	10.018451	9.981549	25
36	9.455893	10.544107	9.474381	10.525619	10.018488	9.981512	24
37	9.456316	10.543684	9.474842	10.525158	10.018526	9.981474	23
38	9.456739	10.543261	9.475303	10.524697	10.018564	9.981436	22
39	9.457162	10.542838	9.475763	10.524237	10.018601	9.981399	21
40	9.457584	10.542416	9.476223	10.523777	10.018639	9.981361	20
41	9.458006	10.541994	9.476683	10.523317	10.018677	9.981322	19
42	9.458427	10.541573	9.477142	10.522858	10.018715	9.981284	18
43	9.458848	10.541152	9.477601	10.522399	10.018753	9.981247	17
44	9.459268	10.540732	9.478059	10.521941	10.018791	9.981209	16
45	9.459688	10.540312	9.478517	10.521483	10.018829	9.981171	15
46	9.460108	10.539892	9.478975	10.521025	10.018867	9.981133	14
47	9.460527	10.539473	9.479432	10.520568	10.018905	9.981095	13
48	9.460946	10.539054	9.479889	10.520111	10.018943	9.981057	12
49	9.461364	10.538636	9.480345	10.519655	10.018981	9.981019	11
50	9.461782	10.538218	9.480801	10.519199	10.019019	9.980981	10
51	9.462199	10.537801	9.481257	10.518743	10.019058	9.980942	9
52	9.462616	10.537384	9.481712	10.518288	10.019096	9.980904	8
53	9.463032	10.536968	9.482167	10.517833	10.019134	9.980866	7
54	9.463448	10.536552	9.482621	10.517379	10.019173	9.980827	6
55	9.463864	10.536136	9.483075	10.516925	10.019211	9.980789	5
56	9.464279	10.535721	9.483529	10.516471	10.019250	9.980750	4
57	9.464694	10.535306	9.483982	10.516018	10.019288	9.980712	3
58	9.465108	10.534892	9.484435	10.515565	10.019327	9.980673	2
59	9.465522	10.534478	9.484887	10.515113	10.019365	9.980635	1
60	9.465935	10.534065	9.485339	10.514661	10.019404	9.980596	0
	Co.s. 73° Sine 163°	Secant 73°	Co.t. 73° Tan. 163°	Tangent 73°	Co. sec. 73°	Sine 73°	Min.

16°

73 — Degrees — 163

73° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	8	39	77	116	155	193	232	271	310	348	387	426

A Table of Artificial Sines,

17 — Degrees — 107.

Min.	Sine 17°	Co. Sec. 17°	Tangent 17°	Co.t. 17° Tan. 107°	Secant 17°	Co.s. 17° Sine 107°	
0	9.465935	10.534065	9.485339	10.514661	10.019404	9.980596	60
1	9.466348	10.533652	9.485791	10.514209	10.019442	9.980558	59
2	9.466761	10.533239	9.486242	10.513758	10.019481	9.980519	58
3	9.467173	10.532827	9.486693	10.513307	10.019520	9.980480	57
4	9.467585	10.532415	9.487143	10.512857	10.019558	9.980442	56
5	9.467996	10.532004	9.487593	10.512407	10.019597	9.980403	55
6	9.468407	10.531593	9.488043	10.511957	10.019636	9.980364	54
7	9.468817	10.531183	9.488492	10.511508	10.019675	9.980325	53
8	9.469227	10.530773	9.488941	10.511059	10.019714	9.980286	52
9	9.469637	10.530363	9.489390	10.510610	10.019753	9.980247	51
10	9.470046	10.529954	9.489838	10.510162	10.019792	9.980208	50
11	9.470455	10.529545	9.490286	10.509714	10.019831	9.980169	49
12	9.470863	10.529137	9.490733	10.509267	10.019870	9.980130	48
13	9.471271	10.528729	9.491180	10.508820	10.019909	9.980091	47
14	9.471679	10.528321	9.491627	10.508373	10.019948	9.980052	46
15	9.472086	10.527914	9.492073	10.507927	10.019988	9.980012	45
16	9.472492	10.527508	9.492519	10.507481	10.020027	9.979973	44
17	9.472898	10.527102	9.492965	10.507035	10.020066	9.979934	43
18	9.473304	10.526696	9.493410	10.506590	10.020105	9.979895	42
19	9.473710	10.526290	9.493854	10.506146	10.020145	9.979855	41
20	9.474115	10.525885	9.494299	10.505701	10.020184	9.979816	40
21	9.474519	10.525481	9.494743	10.505257	10.020224	9.979776	39
22	9.474923	10.525077	9.495186	10.504814	10.020263	9.979737	38
23	9.475327	10.524673	9.495630	10.504370	10.020303	9.979697	37
24	9.475730	10.524270	9.496073	10.503927	10.020342	9.979658	36
25	9.476133	10.523867	9.496515	10.503485	10.020382	9.979618	35
26	9.476536	10.523464	9.496957	10.503043	10.020421	9.979579	34
27	9.476938	10.523062	9.497399	10.502601	10.020461	9.979539	33
28	9.47734	10.522660	9.497841	10.502159	10.020501	9.979499	32
29	9.477741	10.522259	9.498282	10.501718	10.020541	9.979459	31
30	9.478142	10.521858	9.498722	10.501278	10.020580	9.979420	30
	Co.s. 72° Sine 162°	Secant 72°	Co.t. 72° Tan. 162°	Tangent 72°	Co. Sec. 72°	Sine 72°	Min.

17° 72 — Degrees — 162.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
72°	7	33	67	100	134	167	200	234	267	301	334	367
	1	3	7	10	13	16	20	23	26	30	33	36

17 — Degrees — 107.

Min.	Sine 17°	Co. Sec. 17°	Tangent 17°	Co.t. 17° Tan. 107°	Secant 17°	Co.s. 17° Sine 107°	
30	9.478142	10.521858	9.498722	10.501278	10.020581	9.979419	30
31	9.478542	10.521458	9.499163	10.500837	10.020620	9.979380	29
32	9.478942	10.521058	9.499603	10.500397	10.020660	9.979340	28
33	9.479342	10.520658	9.500042	10.499958	10.020700	9.979300	27
34	9.479741	10.520259	9.500481	10.499519	10.020740	9.979260	26
35	9.480140	10.519860	9.500920	10.499080	10.020780	9.979220	25
36	9.480539	10.519461	9.501359	10.498641	10.020820	9.979180	24
37	9.480937	10.519063	9.501797	10.498203	10.020860	9.979140	23
38	9.481334	10.518666	9.502235	10.497765	10.020900	9.979100	22
39	9.481731	10.518269	9.502672	10.497328	10.020941	9.979059	21
40	9.482128	10.517872	9.503109	10.496891	10.020981	9.979019	20
41	9.482525	10.517475	9.503546	10.496454	10.021021	9.978979	19
42	9.482921	10.517079	9.503982	10.496018	10.021061	9.978939	18
43	9.483316	10.516684	9.504418	10.495582	10.021102	9.978898	17
44	9.483712	10.516288	9.504854	10.495146	10.021142	9.978858	16
45	9.484107	10.515892	9.505289	10.494711	10.021183	9.978817	15
46	9.484501	10.515495	9.505724	10.494276	10.021223	9.978777	14
47	9.484895	10.515105	9.506159	10.493841	10.021264	9.978736	13
48	9.485289	10.514711	9.506593	10.493407	10.021304	9.978696	12
49	9.485682	10.514318	9.507027	10.492973	10.021345	9.978655	11
50	9.486075	10.513925	9.507460	10.492540	10.021385	9.978615	10
51	9.486467	10.513533	9.507893	10.492107	10.021426	9.978574	9
52	9.486860	10.513140	9.508326	10.491674	10.021467	9.978533	8
53	9.487251	10.512749	9.508759	10.491241	10.021507	9.978493	7
54	9.487643	10.512357	9.509191	10.490809	10.021548	9.978452	6
55	9.488033	10.511967	9.509622	10.480378	10.021589	9.978411	5
56	9.488424	10.511576	9.510054	10.489946	10.021630	9.978370	4
57	9.488814	10.511186	9.510485	10.489515	10.021671	9.978329	3
58	9.489204	10.510796	9.510916	10.489084	10.021712	9.978288	2
59	9.489593	10.510407	9.511346	10.488654	10.021753	9.978247	1
60	9.489982	10.510018	9.511776	10.488224	10.021794	9.978206	0
	Co.s. 72° Sine 162°	Secant 72°	Co.t. 72° Tan 162°	Tangent 72°	Co. Sec. 72°	Sine 72°	Min.

17°

72 — Degrees — 162.

72° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	7	37	73	110	147	183	220	257	294	330	367	405

A Table of Artificial Sines,

18 — Degrees — 108.

Min.	Sine 18°	Co. Sec. 18°	Tangent 18°	Co.t. 18° Tan. 108°	Secant 18°	Co.s. 18° Sine 108°	
0	9.489982	10.510018	9.511776	10.488224	10.021794	9.978206	60
1	9.490371	10.509629	9.512206	10.487794	10.021835	9.978165	59
2	9.490759	10.509241	9.512635	10.487365	10.021876	9.978124	58
3	9.491147	10.508853	9.513064	10.486936	10.021917	9.978083	57
4	9.491535	10.508465	9.513493	10.486507	10.021958	9.978042	56
5	9.491922	10.508078	9.513921	10.486079	10.021999	9.978001	55
6	9.492308	10.507692	9.514349	10.485651	10.022041	9.977959	54
7	9.492695	10.507305	9.514777	10.485223	10.022082	9.977918	53
8	9.493081	10.506919	9.515204	10.484796	10.022123	9.977877	52
9	9.493466	10.506534	9.515631	10.484369	10.022165	9.977835	51
10	9.493851	10.506149	9.516057	10.483943	10.022206	9 977794	50
11	9.494236	10.505764	9.516484	10.483516	10.022248	9.977752	49
12	9.494621	10.505379	9.516910	10.483090	10.022289	9.97 711	48
13	9 495005	10.504995	9.517335	10.482665	10.022331	9.977669	47
14	9.495388	10.504612	9.517761	10 482239	10.022372	9.977628	46
15	9.495772	10.504228	9.518185	10.481815	10.022414	9.977586	45
16	9 496154	10.503846	9.518610	10.481390	10.022456	9.977544	44
17	9.496537	10.503463	9.519034	10.480966	10.022497	9.977503	43
18	9.496919	10.503081	9.519458	10.480542	10.022539	9.977461	42
19	9.497301	10.502699	9.519882	10.480118	10.022581	9.977419	41
20	9.497682	10.502318	9.520305	10.479695	10.022623	9.977377	40
21	9.498063	10.501937	9.520728	10.479272	10.022665	9.977335	39
22	9.498444	10.501556	9.521151	10.478849	10.022707	9.977293	38
23	9.498824	10.501176	9.521573	10.478427	10.022749	9.977251	37
24	9.499204	10.500796	9.521995	10.478005	10.022791	9.977209	36
25	9 499584	10.500416	9.522417	10.477583	10.022833	9.977167	35
26	9.499963	10.500037	9.522838	10.477162	10.022875	9.977125	34
27	9.500342	10.499659	9.523259	10.476741	10.022917	9.977083	33
28	9.500721	10.499279	9.523680	10.476320	10.022959	9.977041	32
29	9.501099	10.498901	9.524100	10.475900	10.023001	9.976999	31
30	9.501476	10.498524	9.524520	10.475480	10.023043	9.976957	30
	Co.s. 71° Sine 161°	Secant 71°	Co.t. 71° Tan 161°	Tangent 71°	Co. Sec. 71°	Sine 71°	Min.

71 — Degrees — 161.

18° Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	6	31	63	94	126	157	189	220	252	283	315	346
78°	1	4	7	11	14	18	21	25	28	32	35	39

18 — Degrees — 108.

Min.	Sine 18°	Co. Sec. 18°	Tangent 18°	Co.t. 18° Tan. 108°	Secant 18°	Co.s. 18° Sine 108°	Min.
30	9.501476	10.498524	9.524520	10.475480	10.023043	9.976957	30
31	9.501854	10.498146	9.524939	10.475061	10.023086	9.976914	29
32	9.502231	10.497769	9.525359	10.474641	10.023128	9.976872	28
33	9.502607	10.497393	9.525778	10.474222	10.023170	9.976830	27
34	9.502984	10.497016	9.526197	10.473803	10.023213	9.976787	26
35	9.503360	10.496640	9.526615	10.473385	10.023255	9.976745	25
36	9.503735	10.496265	9.527033	10.472967	10.023298	9.976702	24
37	9.504110	10.495890	9.527451	10.472549	10.023340	9.976660	23
38	9.504485	10.495515	9.527868	10.472132	10.023383	9.976617	22
39	9.504860	10.495140	9.528285	10.471715	10.023426	9.976574	21
40	9.505234	10.494766	9.528702	10.471298	10.023468	9.976532	20
41	9.505608	10.494392	9.529119	10.470881	10.023511	9.976489	19
42	9.505981	10.494019	9.529535	10.470465	10.023554	9.976446	18
43	9.506354	10.493646	9.529950	10.470050	10.023596	9.976404	17
44	9.506727	10.493273	9.530366	10.469634	10.023639	9.976361	16
45	9.507099	10.492901	9.530781	10.469219	10.023682	9.976318	15
46	9.507471	10.492529	9.531196	10.468804	10.023725	9.976275	14
47	9.507843	10.492157	9.531611	10.468389	10.023768	9.976232	13
48	9.508214	10.491786	9.532025	10.467975	10.023811	9.976189	12
49	9.508585	10.491415	9.532439	10.467561	10.023854	9.976146	11
50	9.508956	10.491044	9.532853	10.467147	10.023897	9.976103	10
51	9.509326	10.490674	9.533266	10.466734	10.023940	9.976060	9
52	9.509696	10.490304	9.533679	10.466321	10.023983	9.976017	8
53	9.510065	10.489935	9.534092	10.465908	10.024026	9.975974	7
54	9.510434	10.489566	9.534504	10.465496	10.024070	9.975930	6
55	9.510803	10.489197	9.534916	10.465084	10.024113	9.975887	5
56	9.511172	10.488828	9.535328	10.464672	10.024156	9.975844	4
57	9.511540	10.488460	9.535739	10.464261	10.024200	9.975800	3
58	9.511907	10.488093	9.536150	10.463850	10.024243	9.975757	2
59	9.512275	10.487725	9.536561	10.463439	10.024287	9.975713	1
60	9.512642	10.487358	9.536972	10.463028	10.024330	9.975670	0
	Co.s. 71° Sine 161°	Secant 71°	Co.t. 71° Tan. 161°	Tangent 71°	Co. Sec. 71°	Sine 71°	Min.

71 — Degrees — 161.

18°

71° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	7	35	70	105	140	175	210	245	280	315	349	384

A Table of Artificial Sines,

19 — Degrees — 109.

Min.	Sine 19°	Co. Sec. 19°	Tangent 19°	Co.t. 19° Tan. 109°	Secant 19°	Co.s. 19° Sine 109°	
0	9.512642	10.487358	9.536972	10.463028	10.024330	9.975670	60
1	9.513009	10.486991	9.537382	10.462618	10.024374	9.975626	59
2	9.513375	10.486625	9.537792	10 462208	10.024417	9.975583	58
3	9.513741	10.486259	9.538202	10.461798	10.024461	9.975539	57
4	9.514107	10.485893	9.538611	10.461389	10.024504	9.975496	56
5	9.514472	10.485528	9.539020	10.460980	10.024548	9.975452	55
6	9.514837	10.485163	9.539429	10.460571	10.024592	9.975408	54
7	9.515202	10.484798	9.539837	10.460163	10.024635	9.975365	53
8	9.515566	10.484434	9.540245	10.459755	10.024679	9.975321	52
9	9.515930	10.484070	9.540653	10.459347	10.024723	9.975277	51
10	9.516294	10.483706	9.541061	10.458939	10.024767	9.975233	50
11	9.516657	10.483343	9.541468	10.458532	10.024811	9.975189	49
12	9.517020	10.482980	9.541875	10.458125	10.024855	9.975145	48
13	9.517382	10.482618	9.542281	10.457719	10.024899	9.975101	47
14	9.517745	10.482255	9.542688	10.457312	10.024943	9.975057	46
15	9.518107	10.481893	9.543094	10.456906	10.024987	9.975013	45
16	9.518468	10.481532	9.543499	10.456501	10.025031	9.974969	44
17	9.518829	10.481171	9.543905	10.456095	10.025075	9.974925	43
18	9 519190	10.480810	9.544310	10.455690	10.025120	9.974880	42
19	9.5 9551	10.480449	9.544715	10.455285	10.025164	9.9748 6	41
20	9.519911	10.480089	9.545119	10.454881	10.025208	9.974792	40
21	9.520271	10.479729	9.545524	10.45447	10.025253	9.974747	39
22	9.520631	10.479369	9.545928	10.454072	10.025297	9.974703	38
23	9.520990	10.479010	9.546331	10.453669	10.025341	9.974659	37
24	9.521349	10.478651	9.546735	10.453265	10.025386	9 974614	36
25	9.521707	10.478293	9.547138	10.452862	10.025430	9.974570	35
26	9.522066	10.477934	9.547540	10.452460	10.025475	9.974525	34
27	9.522423	10.477577	9.547943	10.452057	10.025519	9.974481	33
28	9.522781	10.477219	9.548345	10.451655	10.025564	9.974436	32
29	9.523138	10.476862	9.548747	10.451253	10.025609	9.974391	31
30	9.523495	10.476505	9.549149	10.450851	10.025653	9.974347	30
	Co.s. 70° Sine 160°	Secant 70°	Co.t. 70° Tan 160°	Tangent 70°	Co. Sec. 70°	Sine 70°	Min.

19

70 — Degrees — 160.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
70°	6	30	59	89	119	148	178	208	238	267	297	327
	1	4	7	11	15	19	22	26	30	34	37	41

19 — Degrees — 109.

Min.	Sine 19°	Co. Sec. 19°	Tangent 19°	Co.t 19° Tan. 109°	Secant 19°	Co.s. 19° Sine 109°	
30	9.523495	10.476505	9.549149	10.450851	10.025653	9.974347	30
31	9.523852	10.476148	9.549550	10.450450	10.025698	9.974302	29
32	9.524208	10.475792	9.549951	10 450049	10.025743	9.974257	28
33	9.524564	10.475436	9.550352	10.449648	10.025788	9.974212	27
34	9.524920	10.475080	9.550752	10.449248	10.025833	9.974167	26
35	9.525275	10.474725	9.551152	10.448848	10.025878	9.974122	25
36	9.525630	10.474370	9.551552	10.448448	10.025923	9.974077	24
37	9.525984	10.474016	9 551952	10.448048	10.025968	9.974032	23
38	9.526339	10.473661	9.552351	10.447649	10.026013	9.973987	22
39	9.526693	10.473307	9.552750	10.447250	10.026058	9.973942	21
40	9.527046	10.472954	9.553149	10.446851	10.026103	9.973897	20
41	9.527400	10.472600	9.553548	10.446452	10.026148	9.973852	19
42	9.527753	10.472247	9.553946	10.446054	10.026193	9.973807	18
43	9.528105	10.471895	9.554344	10.445656	10.026239	9.973761	17
44	9.528458	10.471542	9.554741	10.445259	10.026284	9.973716	16
45	9.528810	10.471190	9.555139	10.444861	10.026329	9.973671	15
46	9.529161	10.470839	9.555536	10.444464	10,026375	9.973625	14
47	9.529513	10.470487	9.555933	10.444067	10.026420	9.973580	13
48	9.529864	10.470136	9.556329	10.443671	10.026465	9.973535	12
49	9.530215	10.469785	9.556725	10.443275	10.026511	9.973489	11
50	9.530565	10.469435	9.557121	10.442879	10.026556	9.973444	10
51	9.530915	10.469085	9.557517	10.442483	10.026602	9.973398	9
52	9.531265	10.468735	9.557913	10.442087	10.026648	9.973352	8
53	9.531614	10.468386	9.558308	10.441692	10.026693	9.973307	7
54	9.531963	10.468037	9.558702	10.441298	10.026739	9.973261	6
55	9.532312	10.467688	9.559097	10.440903	10.026785	9.973215	5
56	9.532661	10.467339	9.559491	10.440509	10.026831	9.973169	4
57	9.533009	10.466991	9.559885	10.440115	10.026876	9.973124	3
58	9.533357	10.466643	9.560279	10.439721	10.026922	9.973078	2
59	9.533704	10.466296	9.560673	10.439327	10.026968	9.973032	1
60	9.534052	10.465948	9.561066	10.438934	10.027014	9.972986	0
	Co.s 70° Sine 160°	Secant 70°	Co.t 70° Tan. 160°	Tangent 70°	Co. sec. 70°	Sine 79°	Min.

19° 70 — Degrees — 160.

70° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	7	33	67	100	134	167	201	234	268	301	334	368

A Table of Artificial Sines,

20 — Degrees — 110.

Min.	Sine 20°	Co. Sec. 20°	Tangent 20°	Co.t. 20° Tan. 110°	Secant 20°	Co.s. 20° Sine 110°	
0	9.534052	10.465948	9.561066	10.438934	10.027014	9.972986	60
1	9.534399	10.465601	9.561459	10.438541	10.027060	9.972940	59
2	9.534745	10.465255	9.561851	10 438149	10.027106	9.972894	58
3	9.535092	10.464908	9.562244	10.437756	10.027152	9.972848	57
4	9.535438	10.464562	9.562636	10.437364	10.027198	9.972802	56
5	9.535783	10.464217	9.563028	10.436972	10.027245	9.972755	55
6	9.536129	10.463871	9.563419	10.436581	10.027291	9.972709	54
7	9.536474	10.463526	9.563811	10.436189	10.027337	9.972663	53
8	9.536818	10.463182	9.564202	10.435798	10.027383	9.972617	52
9	9.537163	10.462837	9.564592	10.435408	1.0027430	9.972570	51
10	9.537507	10.462493	9.564983	10.435017	10.02747	9.972524	50
11	9.537851	10.462149	9.565373	10.434627	10.027523	9.972477	49
12	9.538194	10.461806	9.565763	10.434237	10.027569	9.972431	48
13	9.538538	10.461462	9.566153	10.433847	10.027615	9.972385	47
14	9.538880	10.461120	9.566542	10.433458	10.027662	9.972338	46
15	9.539223	10.460777	9.566932	10.433068	10.027709	9.972291	45
16	9.539565	10.460435	9.567320	10.432680	10.027755	9.972245	44
17	9.539907	10.460093	9.567709	10.432291	10.027802	9.972198	43
18	9 540249	10.459751	9.568098	10.431902	10.027849	9.972151	42
19	9.540590	10.459410	9.568486	10.431514	10.027895	9.972105	41
20	9.540931	10.459069	9.568873	10.431127	10.027942	9.972058	40
21	9.541272	10.458728	9.569261	10.430739	10.027989	9.972011	39
22	9.541613	10.458387	9.569648	10.430352	10.028036	9.971964	38
23	9.541953	10.458047	9.570035	10.429965	10.028083	9.971917	37
24	9.542293	10.457707	9.570422	10.429578	10.028130	9 971870	36
25	9.542632	10.457368	9.570809	10.429191	10.028177	9.971823	35
26	9.542971	10.457029	9.571195	10.428805	10.028224	9.971776	34
27	9.543310	10.456690	9.571581	10.428419	10.028271	9.971729	33
28	9.543649	10.456351	9.571967	10.428033	10.028318	9.971682	32
29	9.543987	10.456013	9.572352	10.427648	10.028365	9.971635	31
30	9.544325	10.455675	9.572738	10.427262	10.028412	9.971588	30
	Co.s. 69° Sine 159°	Secant 69°	Co.t. 69° Tan 159°	Tangent 69°	Co. Sec. 69°	Sine 69°	Min.

69 — Degrees — 159.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
69°	6	28	56	84	113	141	169	197	225	253	281	310
	1	4	8	12	16	19	23	27	31	35	39	43

20 — Degrees — 110.

Min.	Sine 20°	Co. Sec. 20°	Tangent 20°	Co.t. 20° Tan. 110°	Secant 20°	Co.s. 20° Sine 110°	
30	9.544325	10.455675	9.572738	10.427262	10.028413	9.971588	30
31	9.544663	10.455337	9.573123	10.426877	10.028460	9.971540	29
32	9.545000	10.455000	9.573507	10.426493	10.028507	9.971493	28
33	9.545338	10.454662	9.573892	10.426108	10.028554	9.971446	27
34	9.545674	10.454326	9.574276	10.425724	10.028602	9.971398	26
35	9.546011	10.453989	9.574660	10.425340	10.028649	9.971351	25
36	9.546347	10.453653	9.575044	10.424956	10.028697	9.971303	24
37	9.546683	10.453317	9.575427	10.424573	10.028744	9.971256	23
38	9.547019	10.452981	9.575810	10.424190	10.028792	9.971208	22
39	9.547354	10.452646	9.576193	10.423807	10.028839	9.971161	21
40	9.547689	10.452311	9.576576	10.423424	10.028887	9.971113	20
41	9.548024	10.451976	9.576958	10.423042	10.028935	9.971065	19
42	9.548359	10.451641	9.577341	10.422659	10.028982	9.971018	18
43	9.548693	10.451307	9.577723	10.422277	10.029030	9.970970	17
44	9.549027	10.450973	9.578104	10.421896	10.029078	9.970922	16
45	9.549360	10.450640	9.578486	10.421514	10.029126	9.970874	15
46	9.549693	10.450307	9.578867	10.421133	10.029173	9.970827	14
47	9.550026	10.449974	9.579248	10.420752	10.029221	9.970779	13
48	9.550359	10.449641	9.579629	10.420371	10.029269	9.970731	12
49	9.550692	10.449308	9.580009	10.419991	10.029317	9.970683	11
50	9.551024	10.448976	9.580389	10.419611	10.029365	9.970635	10
51	9.551356	10 448644	9.580769	10.419231	10.029414	9 970586	9
52	9.551687	10 448313	9.581149	10.418851	10.02946.	9.970538	8
53	9.552018	10.447982	9.581528	10.418472	10.029510	9.970490	7
54	9.552349	10.447651	9.581907	10.418093	10.029558	9.970442	6
55	9.552680	10.447320	9.582286	10.417714	10.029606	9.970394	5
56	9.553010	10.446990	9.582665	10.417335	10.029655	9.970345	4
57	9.553341	10.446659	9.583043	10.416957	10.029703	9.970297	3
58	9.553670	10.446330	9.583422	10.416578	10.029751	9.970249	2
59	9.554000	10.446000	9.583800	10.416200	10.029800	9.970200	1
60	9.554329	10.445671	9.584177	10.415823	10.029848	9.970152	0
	Co.s.69° Sine 159°	Secant 69°	Co.t. 69° Tan. 159°	Tangent 69°	Co. sec. 69°	Sine 69°	Min.

69 — Degrees — 159

20° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
160°	6	32	64	96	128	160	193	225	257	289	321	353

A Table of Artificial Sines,

21 — Degrees — 111.

Min.	Sine 21°	Co. Sec. 21°	Tangent 21°	Co.t. 21° Tan. 111°	Secant 21°	Co.s. 21° Sine 111°	
0	9.554329	10.445671	9.584177	10.415823	10.029848	9.970152	60
1	9.554658	10.445342	9.584555	10.415445	10.029897	9.970103	59
2	9.554987	10.445013	9.584932	10.415068	10.029945	9.970055	58
3	9.555315	10.444685	9.585309	10.414691	10.029994	9.970006	57
4	9.555643	10.444357	9.585686	10.414314	10.030043	9.969957	56
5	9.555971	10.444029	9.586062	10.413938	10.030091	9.969909	55
6	9.556299	10.443701	9.586439	10.413561	10.030140	9.969860	54
7	9.556626	10.443374	9.586815	10.413185	10.030189	9.969811	53
8	9.556953	10.443047	9.587190	10.412810	10.030238	9.969762	52
9	9.557280	10.442720	9.587566	10.412434	10.030286	9.969714	51
10	9.557606	10.442394	9.587941	10.412059	10.030335	9.969665	50
11	9.557932	10.442068	9.588316	10.411684	10.030384	9.969616	49
12	9.558258	10.441742	9.588691	10.411309	10.030433	9.969567	48
13	9.558583	10.441417	9.589066	10.410934	10.030482	9.969518	47
14	9.558909	10.441091	9.589440	10.410560	10.030531	9.969469	46
15	9.559234	10.440766	9.589814	10.410186	10.030580	9.969420	45
16	9.559558	10.440442	9.590188	10.409812	10.030630	9.969370	44
17	9.559883	10.440117	9.590562	10.409438	10.030679	9.969321	43
18	9.560207	10.439793	9.590935	10.409065	10.030728	9.969272	42
19	9.560531	10.439469	9.591308	10.408692	10.030777	9.969223	41
20	9.560855	10.439145	9.591681	10.408319	10.030827	9.969173	40
21	9.561178	10.438822	9.592054	10.407946	10.030876	9.969124	39
22	9.561501	10.438499	9.592426	10.407574	10.030925	9.969075	38
23	9.561824	10.438176	9.592798	10.407202	10.030975	9.969025	37
24	9.562146	10.437854	9.593171	10.406829	10.031024	9.968976	36
25	9.562468	10.437532	9.593542	10.406458	10.031074	9.968926	35
26	9.562790	10.437210	9.593914	10.406086	10.031123	9.968877	34
27	9.563112	10.436888	9.594285	10.405715	10.031173	9.968827	33
28	9.563433	10.436567	9.594656	10.405344	10.031223	9.968777	32
29	9.563755	10.436245	9.595027	10.404973	10.031272	9.968728	31
30	9.564075	10.435925	9.595398	10.404602	10.031322	9.968678	30
	Co.s. 68° Sine 158°	Secant 68°	Co.t. 68° Tan 158°	Tangent 68°	Co. Sec. 68°	Sine 68°	Min.

21°

68 — Degrees — 158.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
9.568	5	27	53	80	107	134	160	187	214	241	267	294
	0	1	4	8	12	17	21	25	29	33	37	41	46

21 — Degrees — 111.

Min.	Sine 21°	Co. Sec. 21°	Tangent 21°	Co.t. 21° Tan. 111°	Secant 21°	Co.s. 21° Sine 111°	
30	9.564075	10.435925	9.595398	10.404602	10.031322	9.968678	30
31	9.564396	10.435604	9.595768	10.404232	10.031372	9.968628	29
32	9.564716	10.435284	9.596138	10.403862	10.031422	9.968578	28
33	9.565036	10.434964	9.596508	10.403492	10.031472	9 968528	27
34	9.565356	10.434644	9.596878	10.403122	10.031521	9.968479	26
35	9.565676	10.434324	9.597247	10.402753	10.031571	9.968429	25
36	9.565995	10.434005	9.597616	10.402384	10.031621	9.968379	24
37	9.566314	10.433686	9.597985	10.402015	10.031672	9.968328	23
38	9.566632	10.433368	9.598354	10.401646	10.031722	9.968278	22
39	9.566951	10.433049	9.598722	10.401278	10.031772	9.968228	21
40	9.567269	10.432731	9.599091	10.400909	10 031822	9.968178	20
41	9.567587	10.432413	9.599459	10.400541	10,031872	9.968128	19
42	9.567904	10.432096	9.599827	10.400173	10.031922	9.968078	18
43	9.568222	10.431778	9.600194	10.399806	10.031973	9.968027	17
44	9.568539	10.431461	9 600562	10.399438	10.032023	9.967977	16
45	9.568855	10.431145	9.600929	10.399071	10.032073	9.967927	15
46	9.569172	10.430828	9.601296	10.398704	10.032124	9.967876	14
47	9.569488	10.430512	9.601662	10.398338	10.032174	9.967826	13
48	9.569804	10.430196	9.602029	10.397971	10.032225	9.967775	12
49	9.570120	10.429880	9.602395	10.397605	10.032275	9.967725	11
50	9.570435	10.429565	9.602761	10.397239	10.032326	9.967674	10
51	9.570751	10.429249	9.603127	10.396873	10.032377	9.967623	9
52	9.571066	10.428934	9.603493	10.396507	10.032427	9.967573	8
53	9.571380	10.428620	9.603858	10.396142	10.032478	9.967522	7
54	9.571695	10.428305	9.604223	10.395777	10.032529	9.967471	6
55	9.572009	10.427991	9.604588	10.395412	10.032580	9.967420	5
56	9.572323	10.427677	9.604953	10.395047	10.032630	9.967370	4
57	9.572636	10.427364	9.605317	10.394683	10.032681	9.967319	3
58	9.572950	10.427050	9.605682	10.394318	10.032732	9.967268	2
59	9.573263	10.426737	9.606046	10.393954	10.032783	9.967217	1
60	9.573575	10.426425	9.606410	10.393590	10,032834	9.967166	0
	Co.s. 68° Sine 158°	Secant 68°	Co.t. 68° Tan 158°	Tangent 68°	Co. Sec. 68°	Sine 68°	Min.

68 — Degrees — 158.

21°

Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
68°	6	31	62	93	124	154	185	216	247	278	309	340

A Table of Artificial Sines,

22 — Degrees — 112.

Min.	Sine 22°	Co. Sec. 22°	Tangent 22°	Co.t. 22° Tan. 112°	Secant 22°	Co.s. 22° Sine 112°	
0	9·573575	10.426425	9.606410	10.393590	10.032834	9.967166	60
1	9·573888	10.426112	9.606773	10.393227	10.032885	9.967115	59
2	9·574200	10.425800	9.607137	10.392863	10.032936	9.967064	58
3	9·574512	10.425488	9.607500	10.392500	10.032987	9.967013	57
4	9·574824	10.425176	9.607863	10.392137	10.033039	9.966961	56
5	9·575136	10.424864	9.608225	10.391775	10.033090	9.966910	55
6	9·575447	10.424553	9.608588	10.391412	10.033141	9.966859	54
7	9·575758	10.424242	9.608950	10.391050	10.033193	9.966807	53
8	9·576069	10.423931	9.609312	10.390688	10.033244	9.966756	52
9	9·576379	10.423621	9.609674	10.390326	10.033295	9.966705	51
10	9·576689	10.423311	9.610036	10.389964	10.033347	9.966653	50
11	9·576999	10.423001	9.610397	10.389603	10.033398	9.966602	49
12	9·577309	10.422691	9.610759	10.389241	10.033450	9.966550	48
13	9·577618	10.422382	9.611120	10.388880	10.033501	9.966499	47
14	9·577927	10.422073	9.611480	10.388520	10.033553	9.966447	46
15	9·578236	10.421764	9.611841	10.388159	10.033605	9.966395	45
16	9·578545	10.421455	9.612201	10.387799	10.033656	9.966344	44
17	9·578854	10.421146	9.612561	10.387439	10.033708	9.966292	43
18	9·579162	10.420838	9.612921	10.387079	10.033760	9.966240	42
19	9·579469	10.420531	9.613281	10.386719	10.033812	9.966188	41
20	9·579777	10.420223	9.613641	10.386359	10.033863	9.966137	40
21	9·580085	10.419915	9.614000	10.386000	10.033915	9.966085	39
22	9·580392	10.419608	9.614359	10.385641	10.033967	9.966033	38
23	9·580699	10.419301	9.614718	10.385282	10.034019	9.965981	37
24	9·581005	10.418995	9.615077	10.384923	10.034072	9.965928	36
25	9·581312	10.418688	9.615435	10.384565	10.034124	9.965876	35
26	9·581618	10.418382	9.615793	10.384207	10.034176	9.965824	34
27	9·581924	10.418076	9.616151	10.383849	10.034228	9.965772	33
28	9·582229	10.417771	9.616509	10.383491	10.034280	9.965720	32
29	9·582535	10.417465	9.616867	10.383133	10.034332	9.965668	31
30	9·582840	10.417160	9.617224	10.382776	10.034385	9.965615	30
	Co.s. 67° Sine 157°	Secant 67°	Co.t. 67° Tan. 157°	Tangent 67°	Co. Sec. 67°	Sine 67°	Min.

67 — Degrees — 157.

22°

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	25	51	76	102	127	152	178	203	229	254	279
67°	1	4	9	13	17	22	26	30	35	39	43	48

22 — Degrees — 112.

Min.	Sine 22°	Co. Sec. 22°	Tangent 22°	Co.t. 22° Tan. 112°	Secant 22°	Co.s. 22° Sine 112°	
30	9.582840	10.417160	9.617224	10.382776	10.034385	9.965615	30
31	9.583145	10.416855	9.617582	10.382418	10.034437	9.965563	29
32	9.583449	10.416551	9.617939	10.382061	10.034489	9.965511	28
33	9.583754	10.416246	9.618295	10.381705	10.034542	9.965458	27
34	9.584058	10.415942	9.618652	10.381348	10.034594	9.965406	26
35	9.584361	10.415639	9.619008	10.380992	10.034647	9.965353	25
36	9.584665	10.415335	9.619364	10.380636	10.034699	9.965301	24
37	9.584968	10.415032	9.619721	10.380279	10.034752	9.965248	23
38	9.585272	10.414728	9.620076	10.379924	10.034805	9.965195	22
39	9.585574	10.414426	9.620432	10.379568	10.034857	9.965143	21
40	9.585877	10.414123	9.620787	10.379213	10.034910	9.965090	20
41	9.586180	10.413820	9.621142	10.378858	10.034963	9.965037	19
42	9.586482	10.413518	9.621497	10.378503	10.035016	9.964984	18
43	9.586784	10.413216	9.621852	10.378148	10.035069	9.964931	17
44	9.587085	10.412915	9.622207	10.377793	10.035121	9.964879	16
45	9.587386	10.412614	9.622561	10.377439	10.035174	9.964826	15
46	9.587688	10.412312	9.622915	10.377085	10.035227	9.964773	14
47	9.587988	10.412012	9.623269	10.376731	10.035281	9.964719	13
48	9.588289	10.411711	9.623623	10.376377	10.035334	9.964666	12
49	9.588590	10.411410	9.623976	10.376024	10.035386	9.964613	11
50	9.588890	10.411110	9.624330	10.375670	10.035440	9.964560	10
51	9.589190	10.410810	9.624683	10.375317	10.035493	9.964507	9
52	9.589489	10.410511	9.625036	10.374964	10.035546	9.964454	8
53	9.589789	10.410211	9.625388	10.374612	10.035600	9.964400	7
54	9.590088	10.409912	9.625741	10.374259	10.035653	9.964347	6
55	9.590387	10.409613	9.626093	10.373907	10.035706	9.964294	5
56	9.590686	10.409314	9.626445	10.373555	10.035760	9.964240	4
57	9.590984	10.409016	9.626797	10.373203	10.035813	9.964187	3
58	9.591282	10.408718	9.627149	10.372851	10.035867	9.964133	2
59	9.591580	10.408420	9.627501	10.372499	10.035920	9.964080	1
60	9.591878	10.408122	9.627852	10.372148	10.035974	9.964026	0
	Co.s. 67° Sine 157°	Secant 67°	Co.t. 67° Tan. 157°	Tangent 67°	Co. Sec. 67°	Sine 67°	Min.

67 — Degrees — 157.

22°

67° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	6	30	60	89	119	149	179	209	238	268	298	328

A Table of Artificial Sines,

23 — Degrees — 113.

Min.	Sine 23°	Co. Sec. 23°	Tangent 23°	Co.t.23° Tan.113°	Secant 23°	Co.s. 23° Sine 113°	
0	9.591878	10.408122	9.627852	10.372148	10.035974	9.964026	60
1	9.592175	10.407825	9.628203	10.371797	10.036028	9.963972	59
2	9.592473	10.407527	9.628554	10.371446	10.036081	9.963919	58
3	9.592770	10.407230	9.628905	10.371095	10.036135	9.963865	57
4	9.593067	10.406933	9.629255	10.370745	10.036189	9.963811	56
5	9.593363	10.406637	9.629606	10.370394	10.036243	9.963757	55
6	9.593659	10.406341	9.629956	10.370044	10.036296	9.963704	54
7	9.593955	10.406045	9.630306	10.369694	10.036350	9.963650	53
8	9.594251	10.405749	9.630656	10.369344	10.036404	9.963596	52
9	9.594547	10.405453	9.631005	10.368995	10.036458	9.963542	51
10	9.594842	10.405158	9.631355	10.368645	10.036512	9.963488	50
11	9.595137	10.404863	9.631704	10.368296	10.036566	9.963434	49
12	9.595432	10.404568	9.632053	10.367947	10.036621	9.963379	48
13	9.595727	10.404273	9.632401	10.367599	10.036675	9.963325	47
14	9.596021	10.403979	9.632750	10.367250	10.036729	9.963271	46
15	9.596315	10.403685	9.633098	10.366902	10.036783	9.963217	45
16	9.596609	10.403391	9.633447	10.366553	10.036837	9.963163	44
17	9.596903	10.403097	9.633795	10.366205	10.036892	9.963108	43
18	9.597196	10.402804	9.634143	10.365857	10.036946	9.963054	42
19	9.597490	10.402510	9.634490	10.365510	10.037001	9.962999	41
20	9.597783	10.402217	9.634838	10.365162	10.037055	9.962945	40
21	9.598075	10.401925	9.635185	10.364815	10.037110	9.962890	39
22	9.598368	10.401632	9.635532	10.364468	10.037164	9.962836	38
23	9.598660	10.401340	9.635879	10.364121	10.037219	9.962781	37
24	9.598952	10.401048	9.636226	10.363774	10.037273	9.962727	36
25	9.599244	10.400756	9.636572	10.363428	10.037328	9.962672	35
26	9.599536	10.400464	9.636919	10.363081	10.037383	9.962617	34
27	9.599827	10.400173	9.637265	10.362735	10.037438	9.962562	33
28	9.600118	10.399882	9.637611	10.362389	10.037492	9.962508	32
29	9.600409	10.399591	9.637956	10.362044	10.037547	9.962453	31
30	9.600700	10.399300	9.638302	10.361698	10.037602	9.962398	30
	Co.s. 66° Sine 156°	Secant 66°	Co.t. 66° Tan 156°	Tangent 66°	Co. Sec. 66°	Sine 66°	Min.

23°

66 — Degrees — 156.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55′
	5	24	48	73	97	121	145	169	194	218	242	266
66°	1	5	9	14	18	23	28	32	37	41	46	51

23 — Degrees — 113.

Min.	Sine 23°	Co. Sec. 23°	Tangent 23°	Co.t.23° Tan.113°	Secant 23°	Co.s. 23° Sine 113°	
30	9.600700	10.399300	9.638302	10.361698	10.037602	9.962398	30
31	9.600990	10.399010	9.638647	10.361353	10.037657	9.962343	29
32	9.601280	10.398720	9.638992	10.361008	10.037712	9.962288	28
33	9.601570	10.398430	9.639337	0.360663	10.037767	9.962233	27
34	9.601860	10.398140	9.639682	10.360318	10.037822	9.962178	26
35	9.602149	10.397851	9.640027	10.359973	10.037877	9.962123	25
36	9.602439	10.397561	9.640371	10.359629	10.037933	9.962067	24
37	9.602728	10.397272	9.640716	10.359284	10.037988	9.962012	23
38	9.603017	10.396983	9.641060	10.358940	10.038043	9.961957	22
39	9.603305	10.396695	9.641404	10.358596	10.038098	9.961902	21
40	9.603594	10.396406	9.641747	10.358253	10.038154	9.961846	20
41	9.603882	10.396118	9.642091	10.357909	10.038209	9.961791	19
42	9.604170	10.395830	9.642434	10.357566	10.038265	9.961735	18
43	9.604457	10.395543	9.642777	10.357223	10.038320	9.961680	17
44	9.604745	10.395255	9.643120	10.356880	10.038376	9.961624	16
45	9.605032	10.394968	9.643463	10.356537	10.038431	9.961569	15
46	9.605319	10.394681	9.643806	10.356194	10.038487	9.961513	14
47	9.605606	10.394394	9.644148	10.355852	10.038542	9.961458	13
48	9.605892	10.394108	9.644490	10.355510	10.038598	9.961402	12
49	9.606179	10.393821	9.644832	10.355168	10.038654	9.961346	11
50	9.606465	10.393535	9.645174	10.354826	10.038710	9.961290	10
51	9.606751	10.393249	9.645516	10.354484	10.038765	9.961235	9
52	9.607036	10.392964	9.645857	10.354143	10.038821	9.961179	8
53	9.607322	10.392678	9.646199	10.353801	10.038877	9.961123	7
54	9.607607	10.392393	9.646540	10.353460	10.038933	9.961067	6
55	9.607892	10.392108	9.646881	10.353119	10.038989	9.961011	5
56	9.608177	10.391823	9.647222	10.352778	10.039045	9.960955	4
57	9.608461	10.391539	9.647562	10.352438	10.039101	9.960899	3
58	9.608745	10.391255	9.647903	10.352097	10.039157	9.960843	2
59	9.609029	10.390971	9.648243	10.351757	10.039214	9.960786	1
60	9.609313	10.390687	9.648583	10.351417	10.039270	9.960730	0
	Co.s. 66° Sine 156°	Secant 66°	Co.t. 66° Tan 156°	Tangent 66°	Co. Sec. 66°	Sine 66°	Min.

23°

66 — Degrees — 156.

66° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	6	29	58	86	115	144	173	202	230	259	288	317

A Table of Artificial Sines,

24 — Degrees — 114.

Min.	Sine 24°	Co. Sec. 24°	Tangent 24°	Co.t 24° Tan. 114°	Secant 24°	Co.s. 24° Sine 114°	
0	9.609313	10.390687	9.648583	10.351417	10.039270	9.960730	60
1	9.609597	10.390403	9.648923	10.351077	10.039326	9.960674	59
2	9.609880	10.390120	9.649263	10 350737	10.039382	9.960618	58
3	9.610163	10.389837	9.649602	10.350398	10.039439	9.960561	57
4	9.610446	10.389554	9.649942	10.350058	10.039495	9.960505	56
5	9.610729	10.389271	9.650281	10.349719	10.039552	9.960448	55
6	9.611012	10.388988	9.650620	10.349380	10.039608	9.960392	54
7	9.611294	10.388706	9 650959	10.349041	10.039665	9.960335	53
8	9.611576	10.388424	9.651297	10.348703	10.039721	9.960279	52
9	9.611858	10.388142	9.651636	10.348364	10.039778	9.960222	51
10	9.612140	10.387860	9.651974	10.348026	10.039835	9.960165	50
11	9.612421	10.387579	9.652312	10.347688	10.039891	9.960109	49
12	9.612702	10.387298	9.652650	10.347350	10.039948	9.960052	48
13	9.612983	10.387017	9.652988	10.347012	10.040005	9.959995	47
14	9.613264	10.386736	9.653326	10.346674	10.040062	9.959938	46
15	9.613545	10.386455	9.653663	10.346337	10.040118	9.959882	45
16	9.613825	10.386175	9.654000	10.346000	10.040175	9.959825	44
17	9.614105	10.385895	9.654337	10.345663	10.040232	9.959768	43
18	9.614385	10.385615	9.654674	10.345326	10.040289	9.959711	42
19	9.614665	10.385335	9.655011	10.344989	10.040347	9.959653	41
20	9.614944	10.385056	9.655348	10.344652	10.040404	9.959596	40
21	9.615223	10.384777	9.655684	10.344316	10.040461	9.959539	39
22	9.615502	10.384498	9.656020	10.343980	10.040518	9.959482	38
23	9.615781	10.384219	9.656356	10.343644	10.040575	9.959425	37
24	9.616060	10.383940	9.656692	10.343308	10.040632	9.959368	36
25	9.616338	10.383662	9.657028	10.342972	10.040690	9.959310	35
26	9.616616	10.383384	9.657364	10.342636	10.040747	9.959253	34
27	9.616894	10.383106	9.657699	10.342301	10.040805	9.959195	33
28	9.617172	10.382828	9.658034	10.341966	10.040862	9.959138	32
29	9.617450	10.382550	9.658369	10.341631	10.040919	9.959081	31
30	9.617727	10.382273	9.658704	10.341296	10.040977	9.959023	30
	Co.s 65° Sine 155°	Secant 65°	Co.t 65° Tan.155°	Tangent 65°	Co. sec. 65°	Sine 65°	Min.

65 — Degrees — 155.

24°

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55′
65°	5	23	46	69	92	115	139	162	185	208	231	254
	1	5	10	14	19	24	29	34	38	43	48	53

24 — Degrees — 114.

Min.	Sine 24°	Co. Sec. 24°	Tangent 24°	Co.t. 24° Tan. 114°	Secant 24°	Co.s. 24° Sine 114°	
30	9.617727	10.382273	9.658704	10.341296	10.040977	9.959023	30
31	9.618004	10.381996	9.659039	10.340961	10.041035	9.958965	29
32	9.618281	10.381719	9.659373	10.340627	10.041092	9.958908	28
33	9.618558	10.381442	9.659708	10.340292	10.041150	9.958850	27
34	9.618834	10.381166	9.660042	10.339958	10.041208	9.958792	26
35	9.619110	10.380890	9.660376	10.339624	10.041266	9.958734	25
36	9.619386	10.380614	9.660710	10.339290	10.041323	9.958677	24
37	9.619662	10.380338	9.661043	10.338957	10.041381	9.958619	23
38	9.619938	10.380062	9.661377	10.338623	10.041439	9.958561	22
39	9.620213	10.379787	9.661710	10.338290	10.041497	9.958503	21
40	9.620488	10.379512	9.662043	10.337957	10.041555	9.958445	20
41	9.620763	10.379237	9.662376	10.337624	10.041613	9.958387	19
42	9.621038	10.378962	9.662709	10.337291	10.041671	9.958329	18
43	9.621313	10.378687	9.663042	10.336958	10.041729	9.958271	17
44	9.621587	10.378413	9.663375	10.336625	10.041788	9.958212	16
45	9.621861	10.378139	9.663707	10.336293	10.041846	9.958154	15
46	9.622135	10.377865	9.664039	10.335961	10.041904	9.958096	14
47	9.622409	10.377591	9.664371	10.335629	10.041962	9.958038	13
48	9.622682	10.377318	9.664703	10.335297	10.042021	9.957979	12
49	9.622956	10.377044	9.665035	10.334965	10.042079	9.957921	11
50	9.623229	10.376771	9.665366	10.334634	10.042137	9.957863	10
51	9.623502	10.376498	9.665697	10.334303	10.042196	9.957804	9
52	9.623774	10.376226	9.666029	10.333971	10.042254	9.957746	8
53	9.624047	10.375953	9.666360	10.333640	10.042313	9.957687	7
54	9.624319	10.375681	9.666691	10.333309	10.042372	9.957628	6
55	9.624591	10.375409	9.667021	10.332979	10.042430	9.957570	5
56	9.624863	10.375137	9.667352	10.332648	10.042489	9.957511	4
57	9.625135	10.374865	9.667682	10.332318	10.042548	9.957452	3
58	9.625406	10.374594	9.668013	10.331987	10.042607	9.957393	2
59	9.625677	10.374323	9.668343	10.331657	10.042665	9.957335	1
60	9.625948	10.374052	9.668672	10.331328	10.042724	9.957276	0
	Co.s. 65° Sine 155°	Secant 65°	Co.t. 65° Tan. 155°	Tangent 65°	Co. sec. 65°	Sine 65°	Min.

24° — 65 — Degrees — 155

65° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	6	28	56	84	111	139	167	195	223	251	278	306

A Table of Artificial Sines,

25 — Degrees — 115.

Min.	Sine 25°	Co. Sec. 25°	Tangent 25°	Co.t. 25° Tan. 115°	Secant 25°	Co.s. 25° Sine 115°	
0	9.625948	10.374052	9.668673	10.331327	10.042724	9.957276	60
1	9.626219	10.373781	9.669002	10.330998	10.042783	9.957217	59
2	9.626490	10.373510	9.669332	10 330668	10.042842	9.957158	58
3	9.626760	10.373240	9.669661	10.330339	10.042901	9.957099	57
4	9.627030	10.372970	9.669991	10.330009	10.042960	9.957040	56
5	9.627300	10.372700	9.670320	10.329680	10.043019	9.956981	55
6	9.627570	10.372430	9.670649	10.329351	10.043079	9.956921	54
7	9.627840	10.372160	9.670977	10.329023	10.043138	9.956862	53
8	9.628109	10.371891	9.671306	10.328694	10.043197	9.956803	52
9	9.628378	10.371622	9.671634	10.328366	10.043256	9.956744	51
10	9.628647	10.371353	9.671963	10.328037	10.043316	9.956684	50
11	9.628916	10.371084	9.672291	10.327709	10.043375	9.956625	49
12	9.629185	10.370815	9.672619	10.327381	10.043434	9.956566	48
13	9.629453	10.370547	9.672947	10.327053	10.043494	9.956506	47
14	9.629721	10.370279	9.673274	10.326726	10.043553	9.956447	46
15	9.629989	10.370011	9.673602	10.326398	10.043613	9.956387	45
16	9.630257	10.369743	9.673929	10.326071	10.043673	9.956327	44
17	9.630524	10.369476	9.674257	10.325743	10.043732	9.956268	43
18	9.630792	10.369208	9.674584	10.325416	10.043792	9.956208	42
19	9.631059	10.368941	9.674910	10.325090	10.043852	9.956148	41
20	9.631326	10.368674	9.675237	10.324763	10.043911	9.956089	40
21	9.631593	10.368407	9.675564	10.324436	10.043971	9.956029	39
22	9.631859	10.368141	9.675890	10.324110	10.044031	9.955969	38
23	9.632126	10.367874	9.676217	10.323784	10.044091	9.955909	37
24	9.632392	10.367608	9.676543	10.323457	10.044151	9.955849	36
25	9.632658	10.367342	9.676869	10.323131	10.044211	9.955789	35
26	9.632923	10.367077	9.677194	10.322806	10.044271	9.955729	34
27	9.633189	10.366811	9.677520	10.322480	10.044331	9.955669	33
28	9.633454	10.366546	9.677846	10.322154	10.044391	9.955609	32
29	9.633719	10.366281	9.678171	10.321829	10.044452	9.955548	31
30	9.633984	10.366016	9.678496	10.321504	10.044511	9.955488	30
	Co.s. 64° Sine 154°	Secant 64°	Co.t. 64° Tan 154°	Tangent 64°	Co. Sec. 64°	Sine 64°	Min.

25° 64 — Degrees — 154.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
64°	4	22	44	66	88	110	132	154	176	198	220	243
	1	5	10	15	20	25	30	35	40	45	50	55

Tangents and Secants.

25 — Degrees — 115.

Min.	Sine 25°	Co. Sec. 25°	Tangent 25°	Co.t. 25° Tan. 115°	Secant 25°	Co.s. 25° Sine 115°	
30	9.633984	10.366016	9.678496	10.321504	10.044512	9.955488	30
31	9.634249	10.365751	9.678821	10.321179	10.044572	9.955428	29
32	9.634514	10.365486	9.679146	10.320854	10.044632	9.955368	28
33	9.634778	10.365222	9.679471	10.320529	10.044693	9.955307	27
34	9.635042	10.364958	9.679795	10.32 205	10.044753	9.955247	26
35	9.635306	10.364694	9.680120	10.319880	10.044814	9.955186	25
36	9.635570	10.364430	9.680444	10.319556	10.044874	9.955126	24
37	9.635833	10.364167	9.680768	10.319232	10.044935	9.955065	23
38	9.636097	10.363903	9.681092	10.318908	10.044995	9.955005	22
39	9.636360	10.363640	9.681416	10.318584	10.045056	9.954944	21
40	9.636623	10.363377	9.681740	10.318260	10.045117	9.954883	20
41	9.636886	10.363114	9.682063	10.317937	10.045177	9.954823	19
42	9.637148	10.362852	9.682387	10.317613	10.045238	9.954762	18
43	9.637411	10.362589	9.682710	10.317290	10.045299	9.954701	17
44	9.637673	10.362327	9.683033	10.31696-	10.045360	9.954640	16
45	9.637935	10.362065	9.683356	10.316644	10.045421	9.954579	15
46	9.638197	10.361803	9.683679	10.316321	10.045482	9.954518	14
47	9.638458	10.361542	9.684001	10.315999	10.045543	9.954457	13
48	9.638720	10.361280	9.684324	10.315676	10.045604	9.954396	12
49	9.638981	10.361019	9.684646	10.315354	10.045665	9.954335	11
50	9.639242	10.360758	9.684968	10.315032	10.045726	9.954274	10
51	9.639503	10.360497	9.685290	10.314710	10.045787	9.954213	9
52	9.639764	10.360236	9.685612	10.314388	10.045848	9.954152	8
53	9.640024	10.359976	9.685934	10.314066	10.045910	9.954090	7
54	9.640284	10.359716	9.686255	10.313745	10.045971	9.954029	6
55	9.640544	10.359456	9.686577	10.313423	10.046032	9.953968	5
56	9.640804	10.359196	9.686898	10.313102	10.046094	9.953906	4
57	9.641064	10.358936	9.687219	10.312781	10.046155	9.953845	3
58	9.641323	10.358677	9.687540	10.312460	10.046217	9.953783	2
59	9.641583	10.358417	9.687861	10.312139	10.046278	9.953722	1
60	9.641842	10.358158	9.688182	10.311818	10.046340	9.953660	0
	Co.s. 64° Sine 154°	Secant 64°	Co.t. 64° Tan. 154°	Tangent 64°	Co. Sec. 64°	Sine 64°	Min.

25° 64 — Degrees — 154.

64° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	27	54	81	108	135	163	190	217	244	271	298

A Table of Artificial Sines,

26 — Degrees — 116.

Min.	Sine 26°	Co. Sec. 26°	Tangent 26°	Co.t. 26° Tan. 116°	Secant 26°	Co.s. 26° Sine 116°	
0	9.641842	10.358158	9.688182	10.311818	10.046340	9.953660	60
1	9.642101	10.357899	9.688502	10.311498	10.046402	9.953598	59
2	9.642360	10.357640	9.688823	10.311177	10.046463	9.953537	58
3	9.642618	10.357382	9.689143	10.310857	10.046525	9.953475	57
4	9.642876	10.357124	9.689463	10.310537	10.046587	9.953413	56
5	9.643135	10.356865	9.689783	10.310217	10.046648	9.953352	55
6	9.643393	10.356607	9.690103	10.309897	10.046710	9.953290	54
7	9.643650	10.356350	9.690423	10.309577	10.046772	9.953228	53
8	9.643908	10.356092	9.690742	10.309258	10.046834	9.953166	52
9	9.644165	10.355835	9.691062	10.308938	10.046896	9.953104	51
10	9.644423	10.355577	9.691381	10.308619	10.046958	9.953042	50
11	9.644680	10.355320	9.691700	10.308300	10.047020	9.952980	49
12	9.644936	10.355064	9.692019	10.307981	10.047082	9.952918	48
13	9.645193	10.354807	9.692338	10.307662	10.047145	9.952855	47
14	9.645450	10.354550	9.692656	10.307344	10.047207	9.952793	46
15	9.645706	10.354294	9.692975	10.307025	10.047269	9.952731	45
16	9.645962	10.354038	9.693293	10.306707	10.047331	9.952669	44
17	9.646218	10.353782	9.693612	10.306388	10.047394	9.952606	43
18	9.646474	10.353526	9.693930	10.306070	10.047456	9.952544	42
19	9.646729	10.353271	9.694248	10.305752	10.047519	9.952481	41
20	9.646984	10.353016	9.694566	10.305434	10.047581	9.952419	40
21	9.647239	10.352761	9.694883	10.305117	10.047644	9.952356	39
22	9.647494	10.352506	9.695201	10.304799	10.047706	9.952294	38
23	9.647749	10.352251	9.695518	10.304482	10.047769	9.952231	37
24	9.648004	10.351996	9.695836	10.304164	10.047832	9.952168	36
25	9.648258	10.351742	9.696153	10.303847	10.047895	9.952105	35
26	9.648512	10.351488	9.696470	10.303530	10.047957	9.952043	34
27	9.648766	10.351234	9.696787	10.303213	10.048020	9.951980	33
28	9.649020	10.350980	9.697103	10.302897	10.048083	9.951917	32
29	9.649274	10.350726	9.697420	10.302580	10.048146	9.951854	31
30	9.649527	10.350473	9.697736	10.302264	10.048209	9.951791	30
	Co.s. 63° Sine 153°	Secant 63°	Co.t. 63° Tan. 153°	Tangent 63°	Co, Sec, 63°	Sine 63°	Min.

63 — Degrees — 153

26°

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	42	63	85	106	126	148	169	190	211	233
63°	1	5	10	16	21	26	31	37	42	47	52	58

Tangents and Secants.

26 — Degrees — 116.

Min.	Sine 26°	Co. Sec. 26°	Tangent 26°	Co.t. 26° Tan. 116°	Secant 26°	Co.s. 26° Sine 116°	
30	9.649527	10.350473	9.697736	10.302264	10.048209	9.951791	30
31	9.649781	10.350219	9.698053	10.301947	10.048272	9.951728	29
32	9.650034	10.349966	9.698369	10.301631	10.048335	9.951665	28
33	9.650287	10.349713	9.698685	10.301315	10.048398	9.951602	27
34	9.650539	10.349461	9.699001	10.300999	10.048461	9.951539	26
35	9.650792	10.349208	9.699316	10.300684	10.048524	9.951476	25
36	9.651044	10.348956	9.699632	10.300368	10.048588	9.951412	24
37	9.651297	10.348703	9.699947	10.300053	10.048651	9.951349	23
38	9.651549	10.348451	9.700263	10.299737	10.048714	9.951286	22
39	9.651800	10.348200	9.700578	10.299422	10.048778	9.951222	21
40	9.652052	10.347948	9.700893	10.299107	10.048841	9.951159	20
41	9.652304	10.347696	9.701208	10.298792	10.048904	9.951096	19
42	9.652555	10.347445	9.701523	10.298477	10.048968	9.951032	18
43	9.652806	10.347194	9.701837	10.298163	10.049032	9.950968	17
44	9.653057	10.346943	9.702152	10.297848	10.049095	9.950905	16
45	9.653307	10.346693	9.702466	10.297534	10.049159	9.950841	15
46	9.653558	10.346442	9.702780	10.297220	10.049222	9.950778	14
47	9.653808	10.346192	9.703095	10.296905	10.049286	9.950714	13
48	9.654059	10.345941	9.703409	10.296591	10.049350	9.950650	12
49	9.654309	10.345691	9.703723	10.296277	10.049414	9.950586	11
50	9.654558	10.345442	9.704036	10.295964	10.049478	9.950522	10
51	9.654808	10.345192	9.704350	10.295650	10.049542	9.950458	9
52	9.655058	10.344942	9.704663	10.295337	10.049606	9.950394	8
53	9.655307	10.344693	9.704977	10.295023	10.049670	9.950330	7
54	9.655556	10.344444	9.705290	10.294710	10.049734	9.950266	6
55	9.655805	10.344195	9.705603	10.294397	10.049798	9.950202	5
56	9.656054	10.343946	9.705916	10.294084	10.049862	9.950138	4
57	9.656302	10.343698	9.706228	10.293772	10.049926	9.950074	3
58	9.656551	10.343449	9.706541	10.293459	10.049990	9.950009	2
59	9.656799	10.343201	9.706854	10.293146	10.050055	9.949945	1
60	9.657047	10.342953	9.707166	10.292834	10.050119	9.949881	0
	Co.s. 63° Sine 153°	Secant 63°	Co.t. 63° Tan 153°	Tangent 63°	Co. Sec. 63°	Sine 63°	Min.

26°

63 — Degrees — 153.

63° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	26	53	79	105	131	158	184	211	237	263	290

A Table of Artificial Sines,

27 — Degrees — 117.

Min.	Sine 27°	Co. Sec. 27°	Tangent 27°	Co.t. 27° Tan. 117°	Secant 27°	Co.s. 27° Sine 117°	
0	9.657047	10.342953	9.707166	10.292834	10.050119	9.949881	60
1	9.657295	10.342705	9.707478	10.292522	10.050184	9.949816	59
2	9.657542	10.342458	9.707790	10.292210	10.050248	9.949752	58
3	9.657790	10.342210	9.708102	10.291898	10.050312	9.949688	57
4	9.658037	10.341963	9.708414	10.291586	10.050377	9.949623	56
5	9.658284	10.341716	9.708726	10.291274	10.050443	9.949558	55
6	9.658531	10.341469	9.709037	10.290963	10.050506	9.949494	54
7	9.658778	10.341222	9.709349	10.290651	10.050571	9.949429	53
8	9.659025	10.340975	9.709660	10.290340	10.050636	9.949364	52
9	9.659271	10.340729	9.709971	10.290029	10.050700	9.949300	51
10	9.659517	10.340483	9.710282	10.289718	10.050765	9.949235	50
11	9.659763	10.340237	9.710593	10.289407	10.050830	9.949170	49
12	9.660009	10.339991	9.710904	10.289096	10.050895	9.949105	48
13	9.660255	10.339745	9.711215	10.288785	10.050960	9.949040	47
14	9.660500	10.339500	9.711525	10.288475	10.051025	9.948975	46
15	9.660746	10.339254	9.711836	10.288164	10.051090	9.948910	45
16	9.660991	10.339009	9.712146	10.287854	10.051155	9.948845	44
17	9.661236	10.338764	9.712456	10.287544	10.051220	9.948780	43
18	9.661481	10.338519	9.712766	10.287234	10.051285	9.948715	42
19	9.661726	10.338274	9.713076	10.286924	10.051351	9.948649	41
20	9.661970	10.338030	9.713386	10.286614	10.051416	9.948584	40
21	9.662214	10.337786	9.713696	10.286304	10.051481	9.948519	39
22	9.662459	10.337541	9.714005	10.285995	10.051546	9.948454	38
23	9.662703	10.337297	9.714314	10.285686	10.051612	9.948388	37
24	9.662946	10.337054	9.714624	10.285376	10.051677	9.948323	36
25	9.663190	10.336810	9.714933	10.285067	10.051743	9.948257	35
26	9.663433	10.336567	9.715242	10.284758	10.051808	9.948192	34
27	9.663677	10.336323	9.715551	10.284449	10.051874	9.948126	33
28	9.663920	10.336080	9.715860	10.284140	10.051940	9.948060	32
29	9.664163	10.335837	9.716168	10.283832	10.052005	9.947995	31
30	9.664406	10.335594	9.716477	10.283523	10.052071	9.947929	30
	Co.s. 62° Sine 152°	Secant 62°	Co.t. 62° Tan 152°	Tangent 62°	Co. Sec. 62°	Sine 62°	Min.

27°

62 — Degrees — 152.

62° Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	20	40	61	81	101	121	141	162	182	202	222
	1	5	11	16	22	27	33	38	44	49	54	60

27 — Degrees — 117.

Min.	Sine 27°	Co. Sec. 27°	Tangent 27°	Co.t.27° Tan.117°	Secant 27°	Co.s. 27° Sine 117°	
30	9.664106	10.335594	9.716477	10.283523	10.052071	9.947929	30
31	9.664648	10.335352	9.716785	10.283215	10.052137	9.947863	29
32	9.664891	10.335109	9.717093	10.282907	10.052203	9.947797	28
33	9.665133	10.334867	9.717401	10.282599	10.052269	9.947731	27
34	9.665375	10.334625	9.717709	10.282291	10.052335	9.947665	26
35	9.665617	10.334383	9.718017	10.281983	10.052401	9.947599	25
36	9.665859	10.334141	9.718325	10.281675	10.052467	9.947533	24
37	9.666100	10.333900	9.718633	10.281367	10.052533	9.947467	23
38	9.666342	10.333658	9.718940	10.281060	10.052599	9.947401	22
39	9.666583	10.333417	9.719248	10.280752	10.052665	9.947335	21
40	9.666824	10.333176	9.719555	10.280445	10.052731	9.947269	20
41	9.667065	10.332935	9.719862	10.280138	10.052797	9.947203	19
42	9.667305	10.332695	9.720169	10.279831	10.052864	9.947136	18
43	9.667546	10.332454	9.720476	10.279524	10.052930	9.947070	17
44	9.667786	10.332214	9.720783	10.279217	10.052996	9.947004	16
45	9.668026	10.331974	9.721089	10.278911	10.053063	9.946937	15
46	9.668266	10.331734	9.721396	10.278604	10.053129	9.946871	14
47	9.668506	10.331494	9.721702	10.278298	10.053196	9.946804	13
48	9.668746	10.331254	9.722009	10.277991	10.053262	9.946738	12
49	9.668986	10.331014	9.722315	10.277685	10.053329	9.946671	11
50	9.669225	10.330775	9.722621	10.277379	10.053396	9.946604	10
51	9.669464	10.330536	9.722927	10.277073	10.053462	9.946538	9
52	9.669703	10.330297	9.723232	10.276768	10.053529	9.946471	8
53	9.669942	10.330058	9.723538	10.276462	10.053596	9.946404	7
54	9.670181	10.329819	9.723844	10.276156	10.053663	9.946337	6
55	9.670419	10.329581	9.724149	10.275851	10.053730	9.946270	5
56	9.670658	10.329342	9.724454	10.275546	10.053797	9.946203	4
57	9.670896	10.329104	9.724759	10.275241	10.053864	9.946136	3
58	9.671134	10.328866	9.725065	10.274935	10.053931	9.946069	2
59	9.671372	10.328628	9.725369	10.274631	10.053998	9.946002	1
60	9.671609	10.328391	9.725674	10.274326	10.054065	9.945935	0
	Co.s. 62° Sine 152°	Secant 62°	Co.t. 62° Tan 152°	Tangent 62°	Co. Sec. 62°	Sine 62°	Min.

27°

62 — Degrees — 152.

62° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	21	41	62	83	103	124	145	166	186	207	228

A Table of Artificial Sines,

28 — Degrees — 118.

Min.	Sine 28°	Co. Sec. 28°	Tangent 28°	Co.t. 28° Tan. 118°	Secant 28°	Co.s. 28° Sine 118°	
0	9.671609	10.328391	9.725674	10.274326	10.054065	9.945935	60
1	9.671847	10.328153	9.725979	10.274021	10.054132	9.945868	59
2	9.672084	10.327916	9.726284	10.273716	10.054200	9.945800	58
3	9.672321	10.327679	9.726588	10.273412	10.054267	9.945733	57
4	9.672558	10.327442	9.726892	10.273108	10.054334	9.945666	56
5	9.672795	10.327205	9.727197	10.272803	10.054402	9.945598	55
6	9.673032	10.326968	9.727501	10.272499	10.054469	9.945531	54
7	9.673268	10.326732	9.727805	10.272195	10.054536	9.945464	53
8	9.673505	10.326495	9.728109	10.271891	10.054604	9.945396	52
9	9.673741	10.326259	9.728412	10.271588	10.054672	9.945328	51
10	9.673977	10.326023	9.728716	10.271284	10.054739	9.945261	50
11	9.674213	10.325787	9.729020	10.270980	10.054807	9.945193	49
12	9.674448	10.325552	9.729323	10.270677	10.054875	9.945125	48
13	9.674684	10.325316	9.729626	10.270374	10.054942	9.945058	47
14	9.674919	10.325081	9.729929	10.270071	10.055010	9.944990	46
15	9.675155	10.324845	9.730233	10.269767	10.055078	9.944922	45
16	9.675390	10.324610	9.730535	10.269465	10.055146	9.944854	44
17	9.675625	10.324375	9.730838	10.269162	10.055214	9.944786	43
18	9.675859	10.324141	9.731141	10.268859	10.055282	9.944718	42
19	9.676094	10.323906	9.731444	10.268556	10.055350	9.944650	41
20	9.676328	10.323672	9.731746	10.268254	10.055418	9.944582	40
21	9.676562	10.323438	9.732048	10.267952	10.055486	9.944514	39
22	9.676796	10.323204	9.732351	10.267649	10.055554	9.944446	38
23	9.677030	10.322970	9.732653	10.267347	10.055623	9.944377	37
24	9.677264	10.322736	9.732955	10.267045	10.055691	9.944309	36
25	9.677498	10.322502	9.733257	10.266743	10.055759	9.944241	35
26	9.677731	10.322269	9.733558	10.266442	10.055828	9.944172	34
27	9.677964	10.322036	9.733860	10.266140	10.055896	9.944104	33
28	9.678197	10.321803	9.734162	10.265838	10.055964	9.944036	32
29	9.678430	10.321570	9.734463	10.265537	10.056033	9.943967	31
30	9.678663	10.321337	9.734764	10.265236	10.056102	9.943898	30
	Co.s. 61° Sine 151°	Secant 61°	Co.t. 61° Tan 151°	Tangent 61°	Co. Sec. 61°	Sine 61°	Min.

28°

61 — Degrees — 151.

61° Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	19	39	58	78	97	116	136	155	175	194	213
	1	6	11	17	23	28	34	40	46	51	57	63

28 — Degrees — 118.

Min.	Sine 28°	Co. Sec. 28°	Tangent 28°	Co.t. 28° Tan. 118°	Secant 28°	Co.s. 28° Sine 118°	
30	9.678663	10.321337	9.734764	10.265236	10.056102	9.943898	30
31	9.678895	10.321105	9.735065	10.264934	10.056170	9.943830	29
32	9.679128	10.320872	9.735367	10.264633	10.056239	9.943761	28
33	9.679360	10.320640	9.735668	10.264332	10.056307	9 943693	27
34	9.679592	10.320408	9.735969	10.264031	10.056376	9.943624	26
35	9.679824	10.320176	9.736269	10.263731	10.056445	9.943555	25
36	9.680056	10.319944	9.736570	10.263430	10.056514	9.943486	24
37	9.680288	10.319712	9.736871	10.263129	10.056583	9.943417	23
38	9.680519	10.319481	9.737171	10.262829	10.056652	9.943348	22
39	9.680750	10.319250	9.737471	10.262529	10.056721	9.943279	21
40	9.680982	10.319018	9.737771	10.262229	10.056790	9.943210	20
41	9.681213	10.318787	9.738071	10.261929	10.056859	9.943141	19
42	9.681443	10.318557	9.738371	10.261629	10.056928	9.943072	18
43	9.681674	10.318326	9.738671	10.261329	10.056997	9.943003	17
44	9.681905	10.318095	9 738971	10.261029	10.057066	9.942934	16
45	9.682135	10.317865	9.739271	10.260729	10.057136	9.942864	15
46	9.682365	10.317635	9.739570	10.260430	10.057205	9.942795	14
47	9.682595	10.317405	9.739870	10.260130	10.057275	9.942725	13
48	9.682825	10.317175	9.740169	10.259831	10.057344	9.942656	12
49	9.683055	10.316945	9.740468	10.259532	10.057413	9.942587	11
50	9.683284	10.316716	9.740767	10.259233	10.057483	9.942517	10
51	9.683514	10.316486	9.741066	10.258934	10.057552	9.942448	9
52	9.683743	10.316257	9.741365	10.258635	10.057622	9.942378	8
53	9.683972	10.316028	9.741664	10.258336	10.057692	9.942308	7
54	9.684201	10.315799	9.741962	10.258038	10.057761	9.942239	6
55	9.684430	10.315570	9.742261	10.257739	10.057831	9.942165	5
56	9.684658	10.315342	9.742559	10.257441	10.057901	9.942099	4
57	9.684887	10.315113	9.742858	10.257142	10.057971	9.942029	3
58	9.685115	10.314885	9.743156	10.256844	10.058041	9.941959	2
59	9.685343	10.314657	9.743454	10.256546	10.058111	9.941889	1
60	9.685571	10.314429	9.743752	10.256248	10.058181	9.941819	0
	Co.s. 61° Sine 151°	Secant 61°	Co.t. 61° Tan 151°	Tangent 61°	Co. Sec. 61°	Sine 61°	Min.

28°

61 — Degrees — 151.

61° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	25	50	75	100	125	151	176	201	226	251	276

A Table of Artificial Sines,

29 — Degrees — 119.

Min.	Sine 29°	Co. Sec. 29°	Tangent 29°	Co.t 29° Tan. 119°	Secant 29°	Co.s. 29° Sine 119°	
0	9.685571	10.314429	9.743752	10.256248	10.058181	9.941819	60
1	9.685799	10.314201	9.744050	10.255950	10 058251	9.941749	59
2	9.686027	10.313973	9.744348	10 255652	10.058321	9.941675	58
3	9.686254	10.313746	9 744645	10.255355	10.058391	9.941609	57
4	9.686482	10.313518	9.744943	10.255057	10.058461	9.941539	56
5	9.686709	10.313291	9.745240	10.254760	10.058532	9.941468	55
6	9.686936	10.313064	9.745538	10.254462	10.058602	9.941398	54
7	9.687163	10.312837	9 745835	10.254165	10.058672	9.941328	53
8	9.687389	10.312611	9.746132	10.253867	10.058742	9.941258	52
9	9.687616	10.312384	9.746429	10.253571	10.058813	9.941187	51
10	9.687843	10.312157	9.746726	10.293274	10.058883	9.941117	50
11	9.688069	10.311931	9.747023	10.252977	10.058954	9.941046	49
12	9.688295	10.311705	9.747319	10.252681	10.059025	9.940975	48
13	9.688521	10.311479	9.747616	10.252384	10.059095	9.940905	47
14	9.688747	10.311253	9.747913	10.252087	10.059166	9.940834	46
15	9.688972	10.311028	9.748209	10.251791	10.059237	9.940763	45
16	9.689198	10.310802	9.748505	10.251495	10.059307	9.940693	44
17	9.689423	10.310577	9.748801	10.251199	10.059378	9.940622	43
18	9.689648	10.310352	9.749097	10.250903	10.059449	9.940551	42
19	9.689873	10.310127	9.749393	10.250607	10.059520	9.940480	41
20	9.690098	10.309902	9.749689	10.250311	10.059591	9.940409	40
21	9.690323	10.309677	9.749985	10.250015	10.059662	9.940338	39
22	9.690548	10.309452	9.750281	10.249719	10.059733	9.940267	38
23	9.690772	10.309228	9.750576	10.249424	10.059804	9.940196	37
24	9.690996	10.309004	9.750872	10.249128	10.059875	9.940125	36
25	9.691220	10.30878	9.751167	10.248833	10.059947	9.940053	35
26	9.691444	10.308556	9.751462	10.248538	10.060018	9.939982	34
27	9.691668	10.308332	9.751757	10.248243	10.060089	9.939911	33
28	9.691892	10.308108	9.752052	10.247948	10.060160	9.939840	32
29	9.692115	10.307885	9.752347	10.247653	10.060232	9.939768	31
30	9.692339	10.307661	9.752642	10.247358	10.060303	9.939697	30
	Co.s 60° Sine 150°	Secant 60°	Co.t 60° Tan. 150°	Tangent 60°	Co. sec. 60°	Sine 60°	Min.

29°

60 — Degrees — 150.

60' Sine	1''	5''	0''	15''	20''	25''	30''	35''	40''	45''	50''	55''.
	4	19	37	56	74	93	112	130	149	167	186	205
	1	6	12	18	24	30	36	42	48	54	60	65

29 — Degrees — 119.

Min.	Sine 29°	Co. Sec. 29°	Tangent 29°	Co.t. 29° Tan. 119°	Secant 29°	Co.s. 29° Sine 119°	
30	9.692339	10.307661	9.752642	10.247358	10.060303	9.939697	30
31	9.692562	10.307438	9.752937	10.247063	10.060375	9.939625	29
32	9.692785	10.307215	9.753231	10.246769	10.060446	9.939554	28
33	9.693008	10.306992	9.753526	10.246474	10.060518	9.939482	27
34	9.693231	10.306769	9.753820	10.246180	10.060590	9.939410	26
35	9.693453	10.306547	9.754115	10.245885	10.060661	9.939339	25
36	9.693676	10.306324	9.754409	10.245591	10.060733	9.939267	24
37	9.693898	10.306102	9.754703	10.245297	10.060805	9.939195	23
38	9.694120	10.305880	9.754997	10.245003	10.060877	9.939123	22
39	9.694342	10.305658	9.755291	10.244709	10.060949	9.939051	21
40	9.694564	10.305436	9.755585	10.244415	10.061020	9.938980	20
41	9.694786	10.305214	9.755878	10.244122	10.061092	9.938908	19
42	9.695007	10.304993	9.756172	10.243828	10.061164	9.938836	18
43	9.695229	10.304771	9.756465	10.243535	10.061237	9.938763	17
44	9.695450	10.304550	9.756759	10.243241	10.061309	9.938691	16
45	9.695671	10.304329	9.757052	10.242948	10.061381	9.938619	15
46	9.695892	10.304108	9.757345	10.242655	10.061453	9.938547	14
47	9.696113	10.303887	9.757638	10.242362	10.061525	9.938475	13
48	9.696334	10.303666	9.757931	10.242069	10.061598	9.938402	12
49	9.696554	10.303446	9.758224	10.241776	10.061670	9.938330	11
50	9.696774	10.303226	9.758517	10.241483	10.061742	9.938258	10
51	9.696995	10.303005	9.758810	10.241190	10.061815	9.938185	9
52	9.697215	10.302785	9.759102	10.240898	10.061887	9.938113	8
53	9.697435	10.302565	9.759395	10.240605	10.061960	9.938040	7
54	9.697654	10.302346	9.759687	10.240313	10.062033	9.937967	6
55	9.697874	10.302126	9.759979	10.240021	10.062105	9.937895	5
56	9.698094	10.301906	9.760272	10.239728	10.062178	9.937822	4
57	9.698313	10.301687	9.760564	10.239436	10.062251	9.937749	3
58	9.698532	10.301468	9.760856	10.239144	10.062324	9.937676	2
59	9.698751	10.301249	9.761148	10.238852	10.062397	9.937603	1
60	9.698970	10.301030	9.761439	10.238561	10.062469	9.937531	0
	Co.s.60° Sine 150°	Secant 60°	Co.t. 60° Tan. 150°	Tangent 60°	Co. sec. 60°	Sine 60°	Min.

29°

60 — Degrees — 150

60° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	25	49	74	98	123	148	172	197	221	246	271

A Table of Artificial Sines,

30 — Degrees — 120.

Min.	Sine 30°	Co. Sec. 30°	Tangent 30°	Co.t. 30° Tan. 120°	Secant 30°	Co.s. 30° Sine 120°	
0	9.698970	10.301030	9.761439	10.238561	10.062469	9.937531	60
1	9.699189	10.300811	9.761731	10.238269	10.062541	9.937458	59
2	9.699407	10.300593	9.762023	10.237977	10.062615	9.937385	58
3	9.699626	10.300374	9.762314	10.237686	10.062688	9.937312	57
4	9.699844	10.300156	9.762606	10.237394	10.062762	9.937238	56
5	9.700062	10.299938	9.762897	10.237103	10.062835	9.937165	55
6	9.700280	10.299720	9.763188	10.236812	10.062908	9.937092	54
7	9.700498	10.299502	9.763479	10.236521	10.062981	9.937019	53
8	9.700716	10.299284	9.763770	10.236230	10.063054	9.936946	52
9	9.700933	10.299067	9.764061	10.235939	10.063128	9.936872	51
10	9.701151	10.298849	9.764352	10.235648	10.063201	9.936799	50
11	9.701368	10.298632	9.764643	10.235357	10.063274	9.936725	49
12	9.701585	10.298415	9.764933	10.235067	10.063348	9.936652	48
13	9.701802	10.298198	9.765224	10.234776	10.063421	9.936578	47
14	9.702019	10.297981	9.765514	10.234486	10.063494	9.936505	46
15	9.702236	10.297764	9.765805	10.234195	10.063569	9.936431	45
16	9.702452	10.297548	9.766095	10.233905	10.063643	9.936357	44
17	9.702669	10.297331	9.766385	10.233615	10.063716	9.936284	43
18	9.702885	10.297115	9.766675	10.233325	10.063790	9.936210	42
19	9.703101	10.296899	9.766965	10.233035	10.063864	9.936136	41
20	9.703317	10.296683	9.767255	10.232745	10.033938	9.936062	40
21	9.703533	10.296467	9.767545	10.232455	10.044012	9.935988	39
22	9.703749	10.296251	9.767834	10.232166	10.044086	9.935914	38
23	9.703964	10.296036	9.768124	10.231876	10.044160	9.935840	37
24	9.704179	10.295821	9.768413	10.231586	10.044234	9.935766	36
25	9.704395	10.295605	9.768703	10.231297	10.064308	9.935692	35
26	9.704610	10.295390	9.768992	10.231008	10.064382	9.935618	34
27	9.704825	10.295175	9.769281	10.230719	10.064457	9.935543	33
28	9.705040	10.294960	9.769570	10.230430	10.064531	9.935469	32
29	9.705254	10.294746	9.769860	10.230140	10.064605	9.935395	31
30	9.705469	10.294531	9.770148	10.239852	10.064680	9.935320	30
	Co.s. 59° Sine 149°	Secant 59°	Co.t. 59° Tan. 149°	Tangent 59°	Co. Sec. 59°	Sine 59°	Min.

30°

59 — Degrees — 149

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	18	36	54	71	89	108	126	143	161	178	196
59°	1	6	12	19	25	31	37	43	50	56	62	68

30 — Degrees — 120.

Min.	Sine 30°	Co. Sec. 30°	Tangent 30°	Co.t. 30° Tan. 120°	Secant 30°	Co.s. 30° Sine 120°	
30	9.705469	10.294531	9.770148	10.229852	10.064680	9.935320	30
31	9.705683	10.294317	9.770437	10.229563	10.064754	9.935246	29
32	9.705897	10.294103	9.770726	10.229274	10.064829	9.935171	28
33	9.706112	10.293888	9.771015	10.228985	10.064903	9.93509	27
34	9 706326	10.293674	9.771303	10.228697	10.064978	9.935022	26
35	9.706539	10.293461	9.771592	10.228408	10.065052	9.934948	25
36	9.706753	10.293247	9.771880	10.228120	10.065127	9.934873	24
37	9.706967	10.293033	9.772168	10.227832	10.065202	9.934798	23
38	9.707180	10.292820	9.772457	10.227543	10.065277	9.934723	22
39	9.707393	10.292607	9.772745	10.227255	10.065351	9.934649	21
40	9.707606	10.292394	9.773033	10.226967	10.065426	9.934574	20
41	9.707819	10.292381	9.773321	10.226679	10.065501	9.934499	19
42	9.708032	10.291968	9.773608	10.226392	10.065576	9.934424	18
43	9.708245	10.291755	9.773896	10.226104	10.065651	9.934349	17
44	9.708457	10.291543	.774184	10.225816	10.065726	9.934274	16
45	9.708670	10.291330	9 77447	10.225529	10.065801	9.934199	15
46	9.708882	10.291118	9.774759	10.225241	10.065877	9.934123	14
47	9.709094	10.290006	9.775046	10.224954	10.065952	9.934048	13
48	9.709306	10.290694	9.775333	10.224667	10.066027	9.933973	12
49	9.709518	10.290482	9.775621	10.224379	10.066102	9.933898	11
50	9.709730	10.290270	9.775908	10.224092	10.066178	9.933822	10
51	9.719941	10.290059	9.776195	10.223805	10.066253	9.933747	9
52	9.710153	10.289847	9.776482	10.213518	10.066329	9 933671	8
53	9.710364	10.289636	9.776769	10.22323	10.066404	9.933596	7
54	9.710575	10.289425	9.777055	10.222945	10.066480	9.933520	6
55	9.710786	10.289214	9.777342	10.222658	10.066556	9.933444	5
56	9.710997	10.289003	9.777628	10.22237	10.066631	9.933365	4
57	9.711208	10.288792	9.777915	10.222085	10.066707	9.933293	3
58	9.711419	10.288581	9.778201	10.221799	10.066783	9.933217	2
59	9.711629	10.288371	9.778487	10.221512	10.066859	9.933141	1
60	9.711839	10.288161	9.778774	10.221226	10.066934	9.933066	0
	Co.s. 59° Sine 149°	Secant 59°	Co.t. 59° Tan. 149°	Tangent 59°	Co. Sec. 59°	Sine 59°	Min.

30°

59 — Degrees — 149.

59° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	24	48	72	96	120	144	168	192	216	240	265

A Table of Artificial Sines,

31 — Degrees — 1[illegible].

Min.	Sine 31°	Co. Sec. 31°	Tangent 31°	Co.t. 31° Tan. 121°	Secant 31°	Co.s. 31° Sine 121°	
0	9.711839	10.288161	9.778774	10.221226	10.066934	9.933066	60
1	9.712049	10.287951	9.779060	10.220940	10.067010	9.932990	59
2	9.712260	10.287740	9.779346	10 220654	10.067086	9.932914	58
3	9.712469	10.287531	9.779632	10.220368	10.067162	9.932838	57
4	9.712679	10.287321	9.779918	10.220082	10.067238	9.932762	56
5	9.712889	10.287111	9.786203	10.[illegible]9797	10.067315	9 932685	55
6	9.713098	10.286902	9.780489	10.219511	10.067391	9.932609	54
7	9.713308	10.286692	9.780775	10.219225	10.067467	9.932533	53
8	9.713517	10.286483	9.781066	10.218940	10.067543	9.932457	52
9	9.713726	10.286274	9.781346	10.218654	10.067620	9.932380	51
10	9.713935	10.286065	9.781631	10.218369	10.067696	9.932304	50
11	9.714144	10.285856	9.781916	0.218084	10.067772	9.932228	49
12	9.714352	10.285648	9.782201	10.217799	0.067849	9.932151	48
13	9.714561	10.285439	9.782486	10.217514	10.067925	9.932075	47
14	9.714769	10.285231	9.782771	10.217229	10.068002	9.931998	46
15	9.714978	10.285022	9.783056	10.216944	10.068079	9.931921	45
16	9.715186	10.284814	9.783341	10.216659	10.068155	9.931845	44
17	9.715394	10.284606	9.783626	10.216374	10.068232	9.931768	43
18	9 715601	10.284399	9.783910	10.216090	10.068309	9.931691	42
19	9.715809	10.284191	9.784195	10.215805	10.068386	9.931614	41
20	9.716017	10.283983	9.784479	10.21552[illegible]	10.068463	9.931537	40
21	9.716224	10.283776	9.784764	10.215236	10.068540	9.931460	39
22	9.716432	10.283568	9.785048	10.214952	10.068617	9.931383	38
23	9.716639	10.283361	9.785332	10.214668	10.068694	9.931306	37
24	9.716846	10.283154	9.785616	10.214384	10.068771	9 931229	36
25	9.717053	10.282947	9.785900	10.214100	10.068848	9.931152	35
26	9.717259	10.282741	9.786184	10.213816	10.068925	9.931075	34
27	9.717466	10.282534	9.786468	10.213532	10.069002	9.930998	33
28	9.717673	10.282327	9.786752	10.213248	10.069080	9.930920	32
29	9.717879	10.282121	9.787036	10.212964	10.069157	9.930843	31
30	9.718085	10.281915	9.787319	10.212681	10.069234	9.930766	30
	Co.s. 58° Sine 148°	Secant 58°	Co.t. 58° Tan 148°	Tangent 58°	Co. Sec. 58°	Sine 58°	Min.

31° 58 — Degrees — 148.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
58°	3	17	34	52	69	86	103	120	138	155	172	189
	1	6	13	19	26	32	39	45	52	58	64	71

31 — Degrees — 121.

Min.	Sine 31°	Co. Sec. 31°	Tangent 31°	Co.t. 31° Tan. 121°	Secant 31°	Co.s. 31° Sine 121°	
30	9.718085	10.281915	9.787319	10.212681	10.069234	9.930766	30
31	9.718291	10.281709	9.787603	10.212397	10.069312	9.930688	29
32	9.718497	10.281503	9.787886	10.212114	10.069389	9.930611	28
33	9.718703	10.281297	9.788170	10.211830	10.069467	9.930533	27
34	9 718909	10.281091	9.788453	10.211547	10.069544	9.930456	26
35	9.719114	10.280886	9.788736	10.211264	10.069622	9.930378	25
36	9.719320	10.280680	9.789019	10.210981	10.069700	9.930300	24
37	9.719525	10.280475	9.789302	10.210698	10.069777	9.930223	23
38	9.719730	10.280270	9.789585	10.210415	10.069855	9.930145	22
39	9.719935	10.280065	9.789868	10.210132	10.069933	9.930067	21
40	9.720140	10.279860	9.790151	10.209849	10.070011	9.929989	20
41	9.720345	10.279655	9.790433	10.209567	10.070089	9.929911	19
42	9.720549	10.279451	9.790716	10.209284	10.070167	9.929833	18
43	9.720754	10.279246	9.790999	10.209001	10.070245	9.929755	17
44	9.720958	10.279042	9.791281	10.208719	10.070323	9.929677	16
45	9.721162	10.278838	9 791563	10.208437	10.070401	9.929599	15
46	9.721366	10.278634	9.791846	10.208154	10.070479	9.929521	14
47	9.721570	10.278430	9.792128	10.207872	10.070558	9.929442	13
48	9.721774	10.278226	9.792410	10.207590	10.070636	9.929364	12
49	9.721978	10.278022	9.792692	10.207308	10.070714	9.929286	11
50	9.722181	10.277819	9.792974	10.207026	10.070793	9.929207	10
51	9.722385	10.277615	9.793256	10.206744	10.070871	9.929129	9
52	9.722588	10.277412	9.793538	10.206462	10.070950	9 929050	8
53	9.722791	10.277209	9.793819	10.206181	10.071028	9.928972	7
54	9.722994	10.277006	9.794101	10.205899	10.071107	9.928893	6
55	9.723197	10.276803	9.794383	10.205617	10.071186	9.928814	5
56	9.723400	10.276600	9.794664	10.205336	10.071264	9.928736	4
57	9.723603	10.276397	9.794945	10.205055	10.071343	9.928657	3
58	9.723805	10.276195	9.795227	10.204773	10.071422	9.928578	2
59	9.724007	10.275993	9.795508	10.204492	10.071501	9.928499	1
60	9.724210	10.275790	9.795789	0.204211	10.071580	9.92 420	0
	Co.s. 58° Sine 148°	Secant 58°	Co.t. 58° Tan. 148°	Tangent 58°	Co. Sec. 58°	Sine 58°	Min.

58 — Degrees — 148.

31°

58° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	24	47	71	95	118	142	166	189	213	236	260

A Table of Artificial Sines,

32 — Degrees — 122.

Min.	Sine 32°	Co. Sec. 32°	Tangent 32°	Co.t. 32° Tan. 122°	Secant 32°	Co.s. 32° Sine 122°	
0	9.724210	10.275790	9.795789	10.204211	10.071580	9.928420	60
1	9.724412	10.275588	9.796070	10.203930	10.071659	9.928341	59
2	9.724614	10.275386	9.796351	10 203649	10.071738	9.928262	58
3	9.724816	10.275184	9.796632	10.203368	10.071817	9.928183	57
4	9.725017	10.274983	9.796913	10.203087	10.071896	9.928104	56
5	9.725219	10.274781	9.797194	10.202806	10.071975	9.928025	55
6	9.72542	10.274580	9.797475	10.202525	10.072054	9.927946	54
7	9.725622	10.274378	9.797755	10.202245	10.072133	9.927867	53
8	9.725823	10.274177	9.798036	10.201964	10.072213	9.927787	52
9	9.726024	10.273976	9.798316	10.201684	10.072292	9.927708	51
10	9.726225	10.273775	9.798596	10.201404	10.072372	9.927628	50
11	9.726426	10.273574	9.798877	10.201123	10.072451	9.927549	49
12	9.726626	10.273374	9.799157	10.200843	10.072531	9.927469	48
13	9.726827	10.273173	9.799437	10.200563	10.072610	9.927390	47
14	9.727027	10.272973	9.799717	10.200283	10.072690	9.927310	46
15	9.727228	10.272772	9.799997	10.200003	10.072769	9.927231	45
16	9.727428	10.272572	9.800277	10.199723	10.072849	9.927151	44
17	9.727628	10.272372	9.800557	10.199443	10.072929	9.927071	43
18	9 727828	10.272172	9.800836	10.199164	10.073009	9.926991	42
19	9.728027	10.271973	9.801116	10.198884	10.073089	9.926911	41
20	9.728227	10.271773	9.801396	10.198604	10.073169	9.926831	40
21	9.728427	10.271573	9.801675	10.198325	10.073249	9.926751	39
22	9.728626	10.271374	9.801955	10.198045	10.073329	9.926671	38
23	9.728825	10.271175	9.802234	10.197766	10.073409	9.926591	37
24	9.729024	10.270976	9.802513	10.197487	10.073489	9 926511	36
25	9.729223	10.270777	9.802792	10.197208	10.073569	9.926431	35
26	9.729422	10.270578	9.803072	10.196928	10.073649	9.926351	34
27	9.729621	10.270379	9.803351	10.196649	10.073730	9.926270	33
28	9.729820	10.270180	9.803630	10.196370	10.073810	9.926190	32
29	9.730018	10.269982	9.803908	10.196092	10.073890	9.926110	31
30	9.730216	10.269784	9.804187	10.195813	10.073971	9.926029	30
	Co.s. 57° Sine 147°	Secant 57°	Co.t. 57° Tan 147°	Tangent 57°	Co. Sec. 57°	Sine 57°	Min.

32'

57 — Degrees — 147.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
57°	3	17	33	50	66	83	99	116	132	149	165	182
	1	7	13	20	27	33	40	47	54	60	67	74

32 — Degrees — 122.

Min.	Sine 32°	Co. Sec. 32°	Tangent 32°	Co.t. 32° Tan. 122°	Secant 32°	Co.s. 32° Sine 122°	
30	9.730216	10.269784	9.804187	10.195813	10.073971	9.926029	30
31	9.730415	10.269585	9.804466	10.195534	10.074051	9.925949	29
32	9.730613	10.269387	9.804745	10.195255	10.074132	9.925868	28
33	9.730811	10.269189	9.805023	10.194977	10.074213	9.925787	27
34	9.731009	10.268991	9.805302	10.194698	10.074293	9.925707	26
35	9.731206	10.268794	9.805580	10.194420	10.074374	9.925626	25
36	9.731404	10.268596	9.805859	10.194141	10.074455	9.925545	24
37	9.731601	10.268399	9.806137	10.193863	10.074535	9.925465	23
38	9.731799	10.268201	9.806415	10.193585	10.074616	9.925384	22
39	9 731996	10.268004	9.806693	10.193307	10.074697	9.925303	21
40	9.732193	10.267807	9.806971	10.193029	10.074778	9.925222	20
41	9.732390	10.267610	9.807249	10.192751	10.074859	9.925141	19
42	9.732587	10.267413	9.807527	10.192473	10.074940	9.925060	18
43	9.732784	10.267216	9.807805	10.192195	10.075021	9.924979	17
44	9.732980	10.267020	9.808083	10.191917	10.075103	9.924897	16
45	9.733177	10.266823	9.808361	10.191639	10.075184	9.924816	15
46	9.733373	10.266627	9.808638	10.191362	10.075265	9.924735	14
47	9.733569	10.266431	9.808916	10.191084	10 075347	9.924653	13
48	9.733765	10.266235	9.809193	10.190807	10.075428	9.924572	12
49	9.733961	10.266039	9.809471	10.190529	10.075509	9.924491	11
50	9.734157	10.265843	9.809748	10.190252	10.075591	9.924409	10
51	9.734353	10.265647	9.810025	10.189975	10.075672	9.924328	9
52	9.734548	10.265452	9.810302	10.189698	10.075754	9.924246	8
53	9.734744	10.265256	9.810580	10.189420	10.075836	9.924164	7
54	9.734939	10.265061	9 810857	10 189143	10.075917	9.924083	6
55	9.735134	10.264866	9.811134	10.188866	10.075999	9.924001	5
56	9.735330	10.264670	9.811410	10.188590	10.076081	9.923919	4
57	9.735525	10.264475	9.811687	10.188313	10.076163	9.923837	3
58	9.735719	10.264281	9.811964	10.188036	10.076245	9.923755	2
59	9.735914	10.264086	9.812241	10.187759	10.076327	9.923673	1
60	9.736109	10.263891	9.812517	10.187483	10.076409	9.923591	0
	Co.s. 57° Sine 147°	Secant 57°	Co.t. 57° Tan 147°	Tangent 57°	Co. Sec. 57°	Sine 57°	Min.

32°

57 — Degrees — 147.

57° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	23	46	70	93	116	139	163	186	209	232	256

A Table of Artificial Sines,

33 — Degrees — 123.

Min.	Sine 33°	Co. Sec. 33°	Tangent 33°	Co.t. 33° Tan. 123°	Secant 33°	Co.s. 33° Sine 123°	
0	9.736109	10.263891	9.812517	10.187483	10.076409	9.923591	60
1	9.736303	10.263697	9.812794	10.187206	10.076491	9.923509	9
2	9.736498	10.263502	9.813070	10.186930	10.076573	9.923427	58
3	9.736692	10.263308	9.813347	10.186653	10.076655	9.923345	57
4	9.736886	10.263114	9.813623	10.186377	10.076737	9.923263	56
5	9.737080	10.262920	9.813899	10.186101	10.076820	9.923180	55
6	9.737274	10.262726	9.814175	10.185825	10.076902	9.923098	54
7	9.737467	10.262533	9.814452	10.185548	10.076984	9.923016	53
8	9.737661	10.262339	9.814728	10.185272	10.077067	9.922933	52
9	9.737855	10.262145	9.815004	10.184996	10.077149	9.922851	51
10	9.738048	10.261952	9.815279	10.184721	10.077232	9.922768	50
1	9.738241	10.261759	9.815555	10.184445	10.077314	9.922686	49
12	9.738434	10.261566	9.815831	10.184169	10.077397	9.922603	48
13	9.738627	10.261373	9.816107	10.183893	10.077480	9.922520	47
14	9.738820	10.261180	9.816382	10.183618	10.077562	9.922438	46
15	9.739013	10.260987	9.816658	10.183342	10.077645	9.922355	45
16	9.739205	10.260795	9.816933	10.183067	10.077728	9.922272	44
17	9.739398	10.260602	9.817209	10.182791	10.077811	9.922189	43
18	9.739590	10.260410	9.817484	10.182516	10.077894	9.922106	42
19	9.739783	10.260217	9.817759	10.182241	10.077977	9.922023	41
20	9.739975	10.260025	9.818035	10.181965	10.078060	9.921940	40
21	9.740167	10.259833	9.818310	10.181690	10.078143	9.921857	39
22	9.740359	10.259641	9.818585	10.181415	10.078226	9.921774	38
23	9.740550	10.259450	9.818860	10.181140	10.078309	9.921691	37
24	9.740742	10.259258	9.819135	10.180865	10.078393	9.921607	36
25	9.740934	10.259066	9.819410	10.180590	10.078476	9.921524	35
26	9.741125	10.258875	9.819684	10.180316	10.078559	9.921441	34
27	9.741316	10.258684	9.819959	10.180041	10.078643	9.921357	33
28	9.741507	10.258493	9.820234	10.179766	10.078726	9.921274	32
29	9.741699	10.258301	9.820508	10.179492	10.078810	9.921190	31
30	9.741889	10.258111	9.820783	10.179217	10.078893	9.921107	30
	Co.s. 56° Sine 146°	Secant 56°	Co.t. 56° Tan 146°	Tangent 56°	Co. Sec. 56°	Sine 56°	Min.

33°

50 — Degrees — 146.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
56°	3	16	32	48	64	79	95	111	127	143	159	175
	1	7	14	21	28	35	42	49	56	63	70	76

33 — Degrees — 123.

Min.	Sine 33°	Co. Sec. 33°	Tangent 33°	Co.t. 33° Tan. 123°	Secant 33°	Co.s. 33° Sine 123°	
30	9·741889	10.258111	9.820783	10.179217	10.078893	9·921107	30
31	9·742080	10.257920	9.821057	10.178943	10.078977	9·921023	29
32	9·742271	10.257729	9.821332	10.178668	10.079061	9·920939	28
33	9·742462	10.257538	9.821606	10.178394	10.079145	9 920855	27
34	9·742652	10.257348	9.821880	10.178120	10.079228	9·920772	26
35	9·742842	10.257158	9.822154	10.177846	10.079312	9·920688	25
36	9·743033	10.256967	9.822429	10.177571	10.079396	9·920604	24
37	9·743223	10.256777	9.822703	10.177297	10.079480	9·920520	23
38	9·743413	10.256587	9.822977	10.177023	10.079564	9·920436	22
39	9·743602	10.256398	9.823250	10.176750	10.079648	9·920352	21
40	9·743792	10.256208	9.823524	10.176476	10 079732	9·920268	20
41	9·743982	10.256018	9.823798	10.176202	10.079816	9·920184	19
42	9·744171	10.255829	9.824072	10.175928	10.079901	9·920099	18
43	9·744361	10.255639	9.824345	10.175655	10.079985	9·920015	17
44	9·744550	10.255450	9 824619	10.175381	10.080069	9·919931	16
45	9·744739	10.255261	9.824893	10.175107	10.080154	9·919·46	15
46	9·744928	10.255072	9.825166	10.174834	10.080238	9·919762	14
47	9·745117	10.254883	9.825439	10.174561	10.080323	9·919677	13
48	9·745306	10.254694	9.825713	10.174287	10.080407	9·919593	12
49	9·745494	10.254506	9.825986	10.174014	10.080492	9·919508	11
50	9·745683	10.254317	9.826259	10.173741	10.080576	9·919424	10
51	9·745871	10.254129	9.826532	10.173468	10.080661	9·919339	9
52	9·746059	10.253941	9.826805	10.173195	10.080746	9·919254	8
53	9·746248	10.253752	9.827078	10.172922	10.080831	9·919169	7
54	9·746436	10.253564	9.827351	10.172649	10.080916	9·919084	6
55	9·746624	10.253376	9.827624	10.172376	10.081000	9·919000	5
56	9·746812	10.253188	9.827897	10.172103	10.081085	9·918915	4
57	9·746999	10.253001	9.828170	10.171830	10.081170	9·918830	3
58	9·747187	10.252813	9.828442	10.171558	10.081255	9·918745	2
59	9·747374	10.252626	9.828715	10.171285	10.081341	9·918659	1
60	9·747562	10.252438	9.828987	10.171013	10.081426	9·918574	0
	Co.s. 56° Sine 146°	Secant 56°	Co.t. 56° Tan 146°	Tangent 56°	Co. Sec. 56°	Sine 56°	Min.

33°

56 — Degrees — 146.

56° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	23	46	69	92	114	137	160	183	206	229	252

A Table of Artificial Sines,

34 — Degrees — 124.

Min.	Sine 34°	Co. Sec. 34°	Tangent 34°	Co.t. 34° Tan. 124°	Secant 34°	Co.s. 34° Sine 124°	
0	9.747562	10.252438	9.828987	10.171013	10.081426	9.918574	60
1	9.747749	10.252251	9.829260	10 170740	10.081511	9.918489	59
2	9.747936	10.252064	9.829532	10.170468	10.081596	9.918404	58
3	9.748123	10.251877	9.829805	10.170195	10.081682	9.918318	57
4	9.748310	10.251690	9.830077	10.169923	10.081767	9.918233	56
5	9.748497	10.251503	9.830349	10.169651	10.081853	9.918147	55
6	9.748683	10.251317	9.830621	10.169379	10.081938	9.968062	54
7	9.748870	10.251130	9.830893	10.169107	10.082024	9.917976	53
8	9.749056	10.250944	9.831165	10.168835	10.082109	9.917891	52
9	9.749242	10.250758	9.831437	10.168563	10.082195	9.917805	51
10	9.749429	10.250571	9.831709	10.168291	10.082281	9.917719	50
11	9.749615	10.250385	9.831981	10.168019	10.082366	9.917634	49
12	9.749801	10.250199	9.832253	10.167747	10.082452	9.917548	48
13	9.749987	10.250013	9.832525	10.167475	10.082538	9.917462	47
14	9.750172	10.249828	9.832796	10.167204	10.082624	9.917376	46
15	9.750358	10.249642	9.833068	10.166932	10.082710	9.917290	45
16	9.750543	10.249457	9.833339	10.166661	10.082796	9.917204	44
17	9.750729	10.249271	9.833611	10.166389	10.082882	9.917118	43
18	9.750914	10.249086	9.833882	10.166118	10.082968	9.917032	42
19	9.751099	10.248901	9 834154	10.165846	10.083055	9.916945	41
20	9.751284	10.248716	9.834425	10.165575	10.083141	9.916859	40
21	9.751469	10.248531	9.834696	10.165304	10.083227	9.916773	39
22	9.751654	10.248346	9.834967	10.165033	10.083313	9.91668.	38
23	9.751839	10 248161	9.835238	10.164762	10.083400	9.916600	37
24	9.752023	10.247977	9 835509	10.164491	10.083486	9.916514	36
25	9.752208	10.24779'	9.835780	10.164220	10.083573	9.916427	35
26	9.752392	10.247608	9.836051	10.163949	10.083659	9.916341	34
27	9.752576	10.247424	9.836322	10.163678	10.083746	9.916254	33
28	9.752760	10.247240	9.836593	0.163407	10.083833	9.916167	32
29	9.752944	10.247056	9 836864	10.163136	10.083920	9.916080	31
30	9.753128	10.246872	9.837135	10.162866	10.084006	9.915994	30
	Co.s. 55° Sine 145°	Secant 55°	Co.t. 55° Tan. 145°	Tangent 55°	Co. Sec. 55°	Sine 55°	Min.

34°

55 — Degrees — 145.

Sine	1''	5''	10''	15''	20''	25''	30''	35''	40''	45''	50''	55''
55°	3	15	31	46	61	77	92	107	123	138	153	169
	1	7	14	22	29	36	43	51	58	85	72	80

34 — Degrees — 124.

Min.	Sine 34°	Co. Sec. 34°	Tangent 34°	Co.t. 34° Tan. 124°	Secant 34°	Co.s. 34° sine 124°	
30	9.753128	10.246872	9.837134	10.162866	10.084006	9.915994	30
31	9.753312	10.246688	9.837405	10.162595	10.084093	9.915907	29
32	9.753495	10.246505	9.837675	10.162325	10.084180	9.915820	28
33	9.753679	10.246321	9.837946	10.162054	10.084267	9.915733	27
34	9.753862	10.246138	9.838216	10.161784	10.084354	9.915646	26
35	9.754046	10.245954	9.838487	10.161513	10.084441	9.915559	25
36	9.754229	10.245771	9.838757	10.161243	10.084528	9.915472	24
37	9.754412	10.245588	9.839027	10.160973	10.084615	9.915385	23
38	9.754595	10.245405	9.839297	10.160703	10.084703	9.915297	22
39	9.754778	10.245222	9.839568	10.160432	10.084790	9.915210	21
40	9.754960	10.245040	9.839838	10.160162	10.084877	9.915123	20
41	9.755143	10.244857	9.840108	10.159892	10.084965	9.915035	19
42	9.755326	10.244674	9.840378	10.159622	10.085052	9.914948	18
43	9.755508	10.244492	9.840647	10.159353	10.085140	9.914860	17
44	9.755690	10.244310	9.840917	10.159083	10.085227	9.914773	16
45	9.755872	10.244128	9.841187	10.158813	10.085315	9.914685	15
46	9.756054	10.243946	9.841457	10.158543	10.085402	9.914598	14
47	9.756236	10.243764	9.841726	10.158274	10.085490	9.914510	13
48	9.756418	10.243582	9.841996	10.158004	10.085578	9.914422	12
49	9.756600	10.243400	9.842266	10.157734	10.085666	9.914334	11
50	9.756782	10 243218	9.842535	10.157465	10.085754	9.914246	10
51	9.756963	10 243037	9.842805	10.157195	10.085842	9 914158	9
52	9.757144	10.242856	9.843074	10.156926	10.085930	9.914070	8
53	9.757326	10.242674	9 843343	10.156657	10.086018	9.913982	7
54	9.757507	10.242493	9.843612	10.156388	10.086106	9.913894	6
55	9.757688	10.242312	9.843882	10.156118	10.086194	9.913806	5
56	9 757869	10.242131	9.844151	10.155849	10.086282	9.913718	4
57	9.758050	10.241950	9.844420	10.155580	10.086370	9.913630	3
58	9.758230	10.241770	9.844689	10.155311	10.086459	9.9 3541	2
59	9.758411	10.241589	9.844958	10.155042	10.086547	9.913453	1
60	9.758591	10.241409	9.845227	10.154773	10.086636	9.913364	0
	Co.s. 55° Sine 145°	Secant 55°	Co.t. 55° Tan. 145°	Tangent 55°	Co. sec. 55°	Sine 55°	Min.

34° 55 — Degrees — 145

55° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	5	23	45	68	90	113	135	158	180	203	225	248

A Table of Artificial Sines,

35 — Degrees — 125.

Min.	Sine 35°	Co. Sec. 35°	Tangent 35°	Co.t 35° Tan. 125°	Secant 35°	Co.s. 35° Sine 125°	
0	9.758591	10.241409	9.845227	10.154773	10.086635	9.913365	60
1	9.758772	10.241228	9.845496	10.154504	10.086724	9.913276	59
2	9.758952	10.241048	9.845764	10.154236	10.086813	9.913187	58
3	9.759132	10.240868	9.846033	10.153967	10.086902	9.913099	57
4	9.759312	10.240688	9.846302	10.153698	10.086990	9.913010	56
5	9.759492	10.240508	9.846570	10.153430	10.087078	9.912922	55
6	9.759672	10.240328	9.846839	10.153161	10.087167	9.912833	54
7	9.759851	10.240149	9.847107	10.152893	10.087256	9.912744	53
8	9.760031	10.239969	9.847376	10.152624	10.087345	9.912655	52
9	9.760211	10.239789	9.847644	10.152356	10.087434	9.912566	51
10	9.760390	10.239610	9.847913	10.152087	10.087523	9.912477	50
11	9.760569	10.239431	9.848181	10.151819	10.087612	9.912388	49
12	9.760748	10.239252	9.848449	10.151551	10.087701	9.912299	48
13	9.760927	10.239073	9.848717	10.151283	10.087790	9.912210	47
14	9.761106	10.238894	9.848986	10.151014	10.087879	9.912121	46
15	9.761285	10.238715	9.849254	10.150746	10.087969	9.912031	45
16	9.761464	10.238536	9.849522	10.150478	10.088058	9.911942	44
17	9.761642	10.238358	9.849790	10.150210	10.088147	9.911853	43
18	9.761821	10.238179	9.850058	10.149942	10.088237	9.911763	42
19	9.761999	10.238001	9.850325	10.149675	10.088326	9.911674	41
20	9.762177	10.237823	9.850593	10.149407	10.088416	9.911584	40
21	9.762356	10.237644	9.850861	10.149139	10.088505	9.911495	39
22	9.762534	10.237466	9.851129	10.148871	10.088595	9.911405	38
23	9.762712	10.237288	9.851396	10.148604	10.088685	9.911315	37
24	9.762889	10.237111	9.851664	10.148336	10.088774	9.911226	36
25	9.763067	10.236933	9.851931	10.148069	10.088864	9.911136	35
26	9.763245	10.236755	9.852199	10.147801	10.088954	9.911046	34
27	9.763422	10.236578	9.852466	10.147534	10.089044	9.910956	33
28	9.763600	10.236400	9.852733	10.147267	10.089134	9.910866	32
29	9.763777	10.236223	9.853001	10.146999	10.089224	9.910776	31
30	9.763954	10.236046	9.853268	10.146732	10.089314	9.910686	30
	Co.s 54° Sine 144°	Secant 54°	Co.t. 54° Tan. 144°	Tangent 54°	Co. sec. 54°	Sine 54°	Min.

54 — Degrees — 144.

Diff.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55′
Sine	3	15	30	44	59	74	89	104	118	133	148	163
Co. +	1	7	15	22	30	37	45	52	60	67	75	82

35 ← Degrees — 125

Min.	Sine 35°	Co. Sec. 35°	Tangent 35°	Co.t. 35° Tan. 125°	Secant 35°	Co.s. 35° Sine 125°	
30	9.763954	10.236046	9.853208	10.146732	10.089314	9.910686	30
31	9.764131	10.235869	9.853535	10.146405	10.089404	9.910596	29
32	9.764308	10.235692	9.853802	10.146198	10.089494	9.910506	28
33	9.764485	10.235515	9.854069	10.145931	10.089585	9.910415	27
34	9.764662	10.235338	9.854336	10.145664	10.089675	9.910325	26
35	9.764838	10.235162	9.854603	10.145397	10.089765	9.910235	25
36	9.765015	10.234985	9.854870	10.145130	10.089856	9.910144	24
37	9.765191	10.234809	9.855137	10.144863	10.089946	9.910054	23
38	9.765367	10.234633	9.855404	10.144596	10.09003	9.909963	22
39	9.765544	10.234456	9.855671	10.144329	10.090127	9.909873	21
40	9.765720	10.234280	9.855938	10.144062	10.090218	9.909782	20
41	9.765896	10.234104	9.856204	10.143796	10.090309	9.909691	19
42	9.766072	10.233928	9.856471	10.143529	10.090399	9.909601	18
43	9.766247	10.233753	9.856737	10.143263	10.090490	9.909510	17
44	9.766423	10.233577	9.857004	10.142996	10.090581	9.909419	16
45	9.766598	10.233402	9.857270	10.142730	10.090672	9.909328	15
46	9.766774	10.233226	9.857537	10.142463	10.090763	9.909237	14
47	9.766949	10.233051	9.857803	10.142197	10.090854	9.909146	13
48	9.767124	10.232876	9.858069	10.141931	10.090945	9.909055	12
49	9.767300	10.232700	9.858336	10.141664	10.091036	9.908904	11
50	9.767475	10.232525	9.858602	10.141398	10.091127	9.908873	10
51	9.767649	10.232351	9.858868	10.141132	10.091219	9.908781	9
52	9.767824	10.232176	9.859134	10.140866	10.091310	9.908690	8
53	9.767999	10.232001	9.859400	10.140600	10.091401	9.908599	7
54	9.768173	10.231827	9.859666	10.140334	10.091493	9.908507	6
55	9.768348	10.231652	9.859932	10.140068	10.091584	9.908416	5
56	9.768522	10.231478	9.860198	10.139802	10.091676	9.908324	4
57	9.768697	10.231303	9.860464	10.139536	10.091767	9.908233	3
58	9.768871	10.231129	9.860730	10.139270	10.091859	9.908141	2
59	9.769045	10.230955	9.860995	10.139005	10.091951	9.908049	1
60	9.769219	10.230781	9.861261	10.138739	10.092042	9.907958	0
	Co.s. 54° Sine 144°	Secant 54°	Co.t. 54° Tan. 144°	Tangent 54°	Co. Sec. 54°	Sine 54°	Min.

35° 54 — Degrees — 144.

54° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	22	44	67	89	111	133	156	178	200	222	245

A Table of Artificial Sines,

36 — Degrees — 126.

Min.	Sine 36°	Co. Sec. 36°	Tangent 36°	Co.t 36° Tan. 126°	Secant 36°	Co.s. 36° Sine 126°	
0	9.769219	10.230781	9.861261	10.138739	10.092042	9.907958	60
1	9.769393	10.230607	9.861527	10.138473	10 092134	9.907866	59
2	9.769566	10.230434	9.861792	10 138208	10.092226	9.907774	58
3	9.769740	10.230260	9.862058	10.137942	10.092318	9.907682	57
4	9.769913	10.230087	9.862323	10.137677	10.092410	9.907590	56
5	9.770087	10.229913	9.862589	10.137411	10.092502	9.907498	55
6	9.770260	10.229740	9.862854	10.137146	10.092594	9.907406	54
7	9.770433	10.229567	9 863119	10.136881	10.092686	9.907314	53
8	9.770606	10.229394	9.863385	10.136615	10.092778	9.907222	52
9	9.770779	10.229221	9.863650	10.136350	10.092871	9.907129	51
10	9.770952	10.229048	9.863915	10.136085	10.092963	9.907037	50
11	9.771125	10.228875	9.864180	10.135820	10.093055	9.906945	49
12	9.771298	10.228702	9.864445	10.135555	10.093148	9.906852	48
13	9.771470	10.228530	9.864710	10.135290	10.093240	9.906760	47
14	9.771643	10.228357	9.864975	10.135025	10.093333	9.906667	46
15	9.771815	10.228185	9.865240	10.134760	10.093426	9.906574	45
16	9.771987	10.228013	9.865505	10.134495	10.093518	9.906482	44
17	9.772159	10.227841	9.865770	10.134230	10.093611	9.906389	43
18	9.772331	10.227669	9.866035	10.133965	10.093704	9.906296	42
19	9.772503	10.227497	9.866300	10.133700	10.093796	9.906204	41
20	9.772675	10.227325	9.866564	10.133436	10.093889	9.906111	40
21	9.772847	10.227153	9.866829	10.133171	10.093982	9.906018	39
22	9.773018	10.226982	9.867094	10.132906	10.094075	9.905925	38
23	9.773190	10.226810	9.867358	10.132642	10.094168	9.905832	37
24	9.773361	10.226639	9.867623	10.132377	10.094261	9.905739	36
25	9.773533	10.226467	9.867887	10.132113	10.094355	9.905645	35
26	9.773704	10.226296	9.868152	10.131848	10.094448	9.905552	34
27	9.773875	10.226125	9.868416	10.131584	10.094541	9.905459	33
28	9.774046	10.225954	9.868680	10.131320	10.094634	9.905366	32
29	9.774217	10.225783	9.868945	10.131055	10.094728	9.905272	31
30	9.774388	10.225612	9.869209	10.130791	10.094821	9.905179	30
	Co.s 53° Sine 143°	Secant 53°	Co.t. 53° Tan. 143°	Tangent 53°	Co. sec. 53°	Sine 53°	Min.

53 — Degrees — 143.

36' Sine	1''	5''	10''	15''	20''	25''	30''	35''	40''	45''	50''	55'
	3	14	28	43	57	71	85	100	114	128	142	157
53°	2	8	16	23	31	39	47	55	62	70	78	86

36 — Degrees — 126.

Min.	Sine 36°	Co. Sec. 36°	Tangent 36°	Co.t. 36° Tan. 126°	Secant 36°	Co.s. 36° Sine 126°	
30	9.774388	10.225612	9.869209	10.130791	10.094821	9.905179	30
31	9.774558	10.225442	9.869473	10.130527	10.094915	9.905085	29
32	9.774729	10.225271	9.869737	10.130263	10.095008	9.904992	28
33	9.774899	10.225101	9.870001	10.129999	10.095102	9.904898	27
34	9.775070	10.224930	9.870265	10.129735	10.095196	9.904804	26
35	9.775240	10.224760	9.870529	10.129471	10.095289	9.904711	25
36	9.775410	10.224590	9.870793	10.129207	10.095383	9.904617	24
37	9.775580	10.224420	9.871057	10.128943	10.095477	9.904523	23
38	9.775750	10.224250	9.871321	10.128679	10.095571	9.904429	22
39	9.775920	10.224080	9.871585	10.128415	10.095665	9.904335	21
40	9.776090	10.223910	9.871849	10.128151	10.095759	9.904241	20
41	9.776259	10.223741	9.872112	10.127888	10.095853	9.904147	19
42	9.776429	10.223571	9.872376	10.127624	10.095947	9.904053	18
43	9.776598	10.223402	9.872640	10.127360	10.096041	9.903959	17
44	9.776768	10.223232	9.872903	10.127097	10.096136	9.903864	16
45	9.776937	10.223063	9.873167	10.126833	10.096230	9.903770	15
46	9.777106	10.222894	9.873430	10.126570	10.096324	9.903676	14
47	9.777275	10.222725	9.873694	10.126306	10.096419	9.903581	13
48	9.777444	10.222556	9.873957	10.126043	10.096513	9.903487	12
49	9.777613	10.222387	9.874220	10.125780	10.096608	9.903392	11
50	9.777781	10.222219	9.874483	10.125517	10.096702	9.993298	10
51	9.777950	10.222050	9.874747	10.125253	10.096797	9.993203	9
52	9.778119	10.221881	9.875010	10.124990	10.096892	9.993108	8
53	9.778287	10.221713	9.875273	10.124727	10.096986	9.993014	7
54	9.778455	10.221545	9.875536	10.124464	10.097081	9.992919	6
55	9.778624	10.221376	9.875800	10.124200	10.097176	9.902824	5
56	9.778792	10.221208	9.876063	10.123937	10.097271	9.902729	4
57	9.778960	10.221040	9.876326	10.123674	10.097366	9.902634	3
58	9.779128	10.220872	9.876589	10.123411	10.097461	9.902539	2
59	9.779295	10.220705	9.876851	10.123149	10.097556	9.902444	1
60	9.779463	10.220537	9.877114	10.122886	10.097651	9.902349	0
	Co.s. 53° Sine 143°	Secant 53°	Co.t. 53° Tan. 143°	Tangent 53°	Co. sec. 53°	Sine 53°	Min.

53 — Degrees — 143

53° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	22	44	66	88	110	132	154	176	198	220	242

A Table of Artificial Sines,

37 — Degrees — 127.

Min.	Sine 37°	Co. Sec. 37°	Tangent 37°	Co.t. 37° Tan. 127°	Secant 37°	Co.s. 37° Sine 127°	
0	9.779463	10.220537	9.877114	10.122886	10.097651	9.902349	60
1	9.779631	10.220369	9.877377	10.122623	10.097747	9.902253	59
2	9.779798	10.220202	9.877640	10 12236	10.097842	9.902158	58
3	9.779966	10.220034	9.877903	10.122097	10.097937	9.902063	57
4	9.780133	10.219867	9.878165	10.121835	10.098033	9.901967	56
5	9.780300	10.219700	9.878428	10.121572	10.098128	9.901872	55
6	9.780467	10.219533	9.878691	10.121309	10.098224	9.901776	54
7	9.780634	10.219366	9.878953	10.121047	10.098319	9.901681	53
8	9.780801	10.219199	9.879216	10.120784	10.098415	9.901585	52
9	9.780968	10.219032	9.879478	10.120522	10.098510	9.901490	51
10	9.781134	10.218866	9.879741	10.120259	10.098606	9.901394	50
11	9.781301	10.218699	9.880003	10.119997	10.098702	9.901298	49
12	9.781468	10.218532	9.880266	10.119734	10.098798	9.901202	48
13	9.781634	10.218366	9.880528	10.119472	10. 98894	9.901106	47
14	9.781800	10.218200	9.880790	10.119210	10.098990	9.901010	46
15	9.781966	10.218034	9.881052	10.118948	10.099086	9.900914	45
16	9.782132	10.217868	9.881314	10.118686	10.099182	9.900818	44
17	9.782298	10.217702	9.881576	10.118424	10.099278	9.900732	43
18	9 782464	10.217536	9.881839	10.118161	10.099374	9.900626	42
19	9.782630	10.217370	9.8821 1	10.117899	10.099471	9.900529	41
20	9.782796	10.217204	9.882363	10.117637	10. 99567	9.900433	40
21	9.782961	10.217039	9.882625	10.117375	10.099663	9.900337	39
22	9.78312	10.216873	9.882887	10.117113	10.099760	9.900240	38
23	9.783292	10.216708	9.883148	10.116852	10.099856	9.900144	37
24	9.78345	10.216542	9.883411	10.116589	10.099953	9 900047	36
25	9.783623	10.216377	9.883672	10.116328	10.100049	9.899951	35
26	9.783788	10.216212	9.883934	10.116066	10.100146	9.899854	34
27	9.783953	10.216047	9.884196	10.115804	10.100243	9.899757	33
28	9.784118	10.215882	9.884457	10.115543	10.100340	9.899660	32
29	9.784282	10.215718	9.884719	10.115281	10.100436	9.899564	31
30	9.784447	10.215553	9.884980	10.11502	10.100533	9.899467	30
	Co.s. 52° Sine 142°	Secant 52°	Co.t. 52° Tan 142°	Tangent 52°	Co. Sec. 52°	Sine 52°	Min.

37° 52 — Degrees — 142.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	3	14	27	41	55	69	82	96	110	124	137	151
52°	2	8	16	24	32	40	49	57	65	73	81	89

37 — Degrees — 127.

Min.	Sine 37°	Co. Sec. 37°	Tangent 37°	Co.t. 37° Tan. 127°	Secant 37°	Co.s. 37° Sine 127°	.
30	9.784447	10.215553	9.884980	10.115020	10.100533	9.899467	30
31	9.784612	10.215388	9.885242	10.114758	10.100630	9.899370	29
32	9.784776	10.215224	9.885503	10.114497	10.100727	9.899273	28
33	9.784941	10.215059	9.885765	10.114235	10.100824	9.899176	27
34	9.785105	10.214895	9.886026	10.113974	10.100922	9.899078	26
35	9.785269	10.214731	9.886288	10.113712	10.101019	9.898981	25
36	9.785433	10.214567	9.886549	10.113451	10.101116	9.898884	24
37	9.785597	10.214403	9.886810	10.113190	10.101213	9.898787	23
38	9.785761	10.214239	9.887072	10.112928	10.101311	9.898689	22
39	9.785925	10.214075	9.887333	10.112667	10.101408	9.898592	21
4	9.786089	10.213911	9.887594	10.112406	10.101506	9.898494	20
41	9.786252	10.213748	9.887855	10.112145	10.101603	9.898397	19
42	9.786416	10.213584	9.888116	10.111884	10.101701	9.898299	18
43	9.786579	10.213421	9.888377	10.111623	10.101798	9.898202	17
44	9.786742	10.213258	9.888639	10.111361	10.101896	9.898104	16
45	9.786906	10.213094	9.888900	10.111100	10.101994	9.898006	15
46	9.787069	10.212931	9.889160	10.110840	10.102092	9.897908	14
47	9.787232	10.212768	9.889421	10.110579	10 102190	9.897810	13
48	9.787395	10.212605	9.889682	10.110318	10.102288	9.897712	12
49	9.787557	10.212443	9.889943	10.110057	10.102386	9.897614	11
50	9.787720	10.212280	9.890204	10.109796	10.102484	9.897516	10
51	9.787883	10.212117	9.890465	10.109535	10.102582	9.897418	9
52	9.788045	10.211955	9.890725	10.109275	10.102680	9.897320	8
53	9.788208	10.211792	9.890986	10.109014	10.102778	9.897222	7
54	9.788370	10.211630	9 891246	10 108753	10.102877	9.897123	6
55	9.788532	10.211468	9.891507	10.108493	10.102975	9.897025	5
56	9.788694	10.211306	9.891768	10.108232	10.103074	9.896926	4
57	9.788856	10.211144	9.892028	10.107972	10.103172	9.896828	3
58	9.789018	10.210982	9.892289	10.107711	10.103271	9.896729	2
59	9.789180	10.210820	9.892549	10.107451	10.103369	9.896631	1
60	9.789342	10.210658	9.892810	10.107190	10.103468	9.896532	0
	Co.s. 52° Sine 142°	Secant 52°	Co.t. 52° Tan 142°	Tangent 52°	Co. Sec. 52°	Sine 52°	Min.

52 — Degrees — 142.

37°

1° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
52°	4	22	44	65	87	109	131	153	174	196	218	240

A Table of Artificial Sines,

38 — Degrees — 128.

Min.	Sine 38°	Co. Sec. 38°	Tangent 38°	Co.t. 38° Tan. 128°	Secant 38°	Co.s. 38° Sine 128°	
0	9.789342	10.210658	9.892810	10.107190	10.103468	9.896532	60
1	9.789504	10.210496	9.893076	10.106930	10.103567	9.896433	59
2	9.789665	10.210335	9.893331	10.106669	10.103665	9.896335	58
3	9.789827	10.210173	9.893591	10.106409	10.103764	9.896236	57
4	9.789988	10.210012	9.893851	10.106149	10.103863	9.896137	56
5	9.790149	10.209851	9.894111	10.105889	10.103962	9.896038	55
6	9.790310	10.209690	9.894371	10.105629	10.104061	9.895939	54
7	9.790471	10.209529	9.894632	10.105368	10.104160	9.895840	53
8	9.790632	10.209368	9.894892	10.105108	10.104259	9.895741	52
9	9.790793	10.209207	9.895152	10.104848	10.104359	9.895641	51
10	9.790954	10.209046	9.895412	10.104588	10.104458	9.895542	50
11	9.791115	10.208885	9.895672	10.104328	10.104557	9.895443	49
12	9.791275	10.208725	9.895932	10.104068	10.104657	9.895343	48
13	9.791436	10.208564	9.896192	10.103808	10.104756	9.895244	47
14	9.791596	10.208404	9.896452	10.103548	10.104855	9.895145	46
15	9.791757	10.208243	9.896712	10.103288	10.104955	9.895045	45
16	9.791917	10.208083	9.896971	10.103029	10.105055	9.894945	44
17	9.792077	10.207923	9.897231	10.102769	10.105154	9.894846	43
18	9.792237	10.207763	9.897491	10.102509	10.105254	9.894746	42
19	9.792397	10.207603	9.897751	10.102249	10.105354	9.894646	41
20	9.792557	10.207443	9.898010	10.101990	10.105454	9.894546	40
21	9.792716	10.207284	9.898270	10.101730	10.105554	9.894446	39
22	9.792876	10.207124	9.898530	10.101470	10.105654	9.894346	38
23	9.793035	10.206965	9.898789	10.101211	10.105754	9.894246	37
24	9.793195	10.206805	9.899049	10.100951	10.105854	9.894146	36
25	9.793354	10.206646	9.899308	10.100692	10.105954	9.894046	35
26	9.793514	10.206486	9.899568	10.100432	10.106054	9.893946	34
27	9.793673	10.206327	9.899827	10.100173	10.106154	9.893846	33
28	9.793832	10.206168	9.900086	10.099914	10.106255	9.893745	32
29	9.793991	10.206009	9.900346	10.099654	10.106355	9.893645	31
30	9.794150	10.205850	9.900605	10.099395	10.106456	9.893545	30
	Co.s. 51° Sine 141°	Secant 58°	Co.t. 51° Tan. 141°	Tangent 51°	Co. Sec. 51°	Sine 51°	Min.

38°

51 — Degrees — 141.

Time	1''	5''	10''	15''	20''	25''	30''	35''	40''	45''	50''	55''
1'	3	13	26	40	53	66	79	92	106	119	132	145
2'	2	8	17	25	34	42	50	59	67	76	84	92

38 — Degrees — 128.

Min.	Sine 38°	Co. Sec. 38°	Tangent 38°	Co.t. 38° Tan. 128°	Secant 38°	Co.s. 38° Sine 128°	
30	9·794150	10.205850	9.900605	10.099395	10.106456	9.893544	30
31	9·794308	10.205692	9.900864	10.099136	10.106556	9.893444	29
32	9·794467	10.205533	9.901124	10.098876	10.106657	9.893343	28
33	9·794626	10.205374	9.901383	10.098617	10.106757	9 893243	27
34	9·794784	10.205216	9.901642	10.098358	10.106858	9.893142	26
35	9·794942	10.205058	9.901901	10.098099	10.106959	9.893041	25
36	9·795101	10.204899	9.902160	10.097840	10.107060	9.892940	24
37	9·795259	10.204741	9.902419	10.097581	10.107161	9.892839	23
38	9·795417	10.204583	9.902679	10.097321	10.107261	9.892739	22
39	9·795575	10.204425	9.902938	10.097062	10.107362	9.892638	21
40	9·795733	10.204267	9.903197	10.096803	10.107464	9.892536	20
41	9·795891	10.204109	9.903455	10.096545	10.107565	9.892435	19
42	9·796049	10.203951	9.903714	10.096286	10.107666	9.892334	18
43	9·796206	10.203794	9.903973	10.096027	10.107767	9.892233	17
44	9·796364	10.203636	9 904232	10.095768	10.107868	9.892132	16
45	9·796521	10.203479	9.904491	10.095509	10.107970	9.892030	15
46	9·796679	10.203321	9.904750	10.095250	10.10807	9.891929	14
47	9·796836	10.203164	9.905008	10.094992	10.108173	9.891827	13
48	9·796993	10.203007	9.905267	10.094733	10.108274	9.891726	12
49	9·797150	10.202850	9.905526	10.094474	10.108376	9.891624	11
50	9·797307	10.202693	9.905784	10.094216	10.108477	9.891523	10
51	9·797464	10.202536	9.906043	10.293957	10.108579	9.891421	9
52	9·797621	10.202379	9.906302	10.093698	10.108681	9.891319	8
53	9·797777	10.202223	9.906560	10.093440	10.108783	9.891217	7
54	9·797934	10.202066	9.906819	10.093181	10.108885	9.891115	6
55	9·798091	10.201909	9.907077	10.092923	10.108987	9.891013	5
56	9·798247	10.201753	9.907336	10.092664	10.109089	9.890911	4
57	9·798403	10.201597	9.907594	10.092406	10.109191	9.890809	3
58	9·798560	10.201440	9.907852	10.092148	10.109293	9.890707	2
59	9·798716	10.201284	9.908111	10.091889	10.109395	9.890605	1
60	9·798872	10.201128	9.908369	10.091631	10.109497	9.890503	0
	Co.s. 51° Sine 141°	Secant 51°	Co.t. 51° Tan 141°	Tangent 51°	Co. Sec. 51°	Sine 51°	Min.

38°

51 — Degrees — 141.

51° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	22	43	65	86	108	130	151	173	194	216	238

A Table of, Artificial Sines,

39 — Degrees — 129.

Min.	Sine 39°	Co. Sec. 39°	Tangent 39°	Co.t. 39° Tan. 129°	Secant 39°	Co.s. 39° Sine 129°	
0	9.798872	10.201128	9.908369	10.091631	10.109497	9.890503	60
1	9.799028	10.200972	9.908628	10.091372	10.109600	9.890400	59
2	9.799184	10.200816	9.908886	10.091114	10.109702	9.890298	58
3	9.799339	10.200661	9.909144	10.090856	10.109805	9.890195	57
4	9.799495	10.200505	9.909402	10.090598	10.109907	9.890093	56
5	9.799651	10.200349	9.909660	10.090340	10.110010	9.889990	55
6	9.799806	10.200194	9.909918	10.090082	10.110112	9.889888	54
7	9.799962	10.200038	9.910177	10.089823	10.110215	9.889785	53
8	9.800117	10.199883	9.910435	10.089565	10.110318	9.889682	52
9	9.800272	10.199728	9.910693	10.089307	10.110421	9.889579	51
10	9.800427	10.199573	9.910951	10.089049	10.110523	9.889477	50
11	9.800582	10.199418	9.911209	10.088791	10.110626	9.889374	49
12	9.800737	10.199263	9.911467	10.088533	10.110729	9.889271	48
13	9.800892	10.199108	9.911724	10.088276	10.110832	9.889168	47
14	9.801047	10.198953	9.911982	10.088018	10.110936	9.889064	46
15	9.801201	10.198799	9.912240	10.087760	10.111039	9.888961	45
16	9.801356	10.198644	9.912498	10.087502	10.111142	9.888858	44
17	9.801511	10.198489	9.912756	10.087244	10.111245	9.888755	43
18	9.801665	10.198335	9.913014	10.086986	10.111349	9.888651	42
19	9.801819	10.198181	9.913271	10.086729	10.111452	9.888548	41
20	9.801973	10.198027	9.913529	10.086471	10.111556	9.888444	40
21	9.802128	10.197872	9.913787	10.086213	10.111659	9.888341	39
22	9.802282	10.197718	9.914044	10.085956	10.111763	9.888237	38
23	9.802436	10.197564	9.914302	10.085698	10.111866	9.888134	37
24	9.802589	10.197411	9.914560	10.085440	10.111970	9.888030	36
25	9.802743	10.197257	9.914817	10.085183	10.112074	9.887926	35
26	9.802897	10.197103	9.915075	10.084925	10.112178	9.887822	34
27	9.803050	10.196950	9.915332	10.084668	10.112282	9.887718	33
28	9.803204	10.196796	9.915590	10.084410	10.112386	9.887614	32
29	9.803357	10.196643	9.915847	10.084153	10.112490	9.887510	31
30	9.803511	10.196489	9.916104	10.083896	10.112594	9.887406	30
	Co.s. 50° Sine 140°	Secant 50°	Co.t. 50° Tan 140°	Tangent 50°	Co. Sec. 50°	Sine 50°	Min.

39° 50 — Degrees — 140.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
56°	3	13	27	41	55	69	83	97	110	124	138	152
	2	9	18	26	35	43	52	61	70	78	87	96

39 — Degrees — 129.

Min.	Sine 39°	Co. Sec. 39°	Tangent 39°	Co.t. 39° Tan. 129°	Secant 39°	Co.s. 39° Sine 129°	
30	9.803511	10.196489	9.916105	10.083895	10.112594	9.887406	30
31	9.803664	10.196336	9.916362	10.083638	10.112698	9.887302	29
32	9.803817	10.196183	9.916619	10.083381	10.112802	9.887198	28
33	9.803970	10.196030	9.916877	10.083123	10.112907	9 887093	27
34	9.804123	10.195877	9.917134	10.082866	10.113011	9.886989	26
35	9.804276	10.195724	9.917391	10.082609	10.113115	9.886885	25
36	9.804428	10.195572	9.917648	10.082352	10.113220	9.886780	24
37	9.804581	10.195419	9.917905	10.082095	10.113324	9.886676	23
38	9.804734	10.195266	9.918163	10.081837	10.113429	9.886571	22
39	9.804886	10.195114	9.918420	10.081580	10.113534	9.886466	21
40	9.805039	10.194961	9.918677	10.081323	10 113638	9.886362	20
41	9.805191	10.194809	9.918934	10.081066	10.113743	9.886257	19
42	9.805343	10.194657	9.919191	10.080809	10.113848	9.886152	18
43	9.805495	10.194505	9.919448	10.080552	10.113953	9.886047	17
44	9.805647	10.194353	9 919705	10.080295	10.114058	9.885942	16
45	9.805799	10.194201	9.919962	10.080038	10.114163	9.885837	15
46	9.805951	10.194049	9.920219	10.079781	10.114268	9.885732	14
47	9.806103	10.193897	9.920476	10.079524	10.114373	9.885627	13
48	9.806254	10.193746	9.920732	10.079268	10.114478	9.885522	12
49	9.806406	10.193594	9.920990	10.079010	10.114584	9.885416	11
50	9.806557	10.193443	9.921247	10.078753	10.114689	9.885311	10
51	9.806709	10.193291	9.921503	10.078497	10.114795	9.885205	9
52	9.806860	10.193140	9.921760	10.078240	10.114900	9.885100	8
53	9.807011	10.192989	9.922017	10.077983	10.115006	9.884994	7
54	9.807163	10.192837	9.922274	10.077726	10.115111	9.884889	6
55	9.807314	10.192686	9.922530	10.077470	10.115217	9.884783	5
56	9.807465	10.192535	9.922787	10.077213	10.115323	9.884677	4
57	9.807615	10.192385	9.923044	10.076956	10.115428	9.884572	3
58	9.807766	10.192234	9.923300	10.076700	10.115534	9.884466	2
59	9.807917	10.192083	9.923557	10.076443	10.115640	9.884360	1
60	9.808067	10.191933	9.923813	10.076187	10.115746	9.884254	0
	Co.s. 50° Sine 140°	Secant 50°	Co.t. 50° Tan 140°	Tangent 50°	Co. Sec. 50°	Sine 50°	Min.

39°

50 — Degrees — 140.

50° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	43	64	86	107	129	150	172	193	214	236

A Table of Artificial Sines,

40 — Degrees — 130.

Min.	Sine 40°	Co. Sec. 40°	Tangent 40°	Co.t. 40° Tan. 130°	Secant 40°	Co.s. 40° Sine 130°	
0	9.808067	10.191933	9.923813	10.076187	10.115746	9.884254	60
1	9.808218	10.191782	9.924070	10.075930	10.115852	9.884148	59
2	9.808368	10.191632	9.924327	10.075673	10.115958	9.884042	58
3	9.808519	10.191481	9.924583	10.075417	10.116064	9.883936	57
4	9.808665	10.191331	9.924840	10.075160	10.116171	9.883829	56
5	9.808819	10.191181	9.925096	10.074904	10.116277	9.883723	55
6	9.808969	10.191031	9.925352	10.074648	10.116383	9.883617	54
7	9.809119	10.190881	9.925609	10.074391	10.116490	9.883510	53
8	9.809269	10.190731	9.925865	10.074135	10.116596	9.883404	52
9	9.809419	10.190581	9.926122	10.073878	10.116703	9.883297	51
10	9.809569	10.190431	9.926378	10.073622	10.116809	9.883191	50
11	9.809718	10.190282	9.926634	10.073366	10.116916	9.883084	49
12	9.809868	10.190132	9.926890	10.073110	10.117023	9.882977	48
13	9.810017	10.189983	9.927147	10.072853	10.117129	9.882871	47
14	9.810167	10.189833	9.927403	10.072597	10.117236	9.882764	46
15	9.810316	10.189684	9.927659	10.072341	10.117343	9.882657	45
16	9.810465	10.189535	9.927915	10.072085	10.117450	9.882550	44
17	9.810614	10.189386	9.928171	10.071829	10.117557	9.882443	43
18	9.810763	10.189237	9.928427	10.071573	10.117664	9.882336	42
19	9.810912	10.189088	9.928683	10.071317	10.117771	9.882229	41
20	9.811061	10.188939	9.928940	10.071060	10.117879	9.882121	40
21	9.811210	10.188790	9.929196	10.070804	10.117986	9.882014	39
22	9.811358	10.188642	9.929452	10.070548	10.118093	9.881907	38
23	9.811507	10.188493	9.929708	10.070292	10.118201	9.881799	37
24	9.811655	10.188345	9.929964	10.070036	10.118308	9.881692	36
25	9.811804	10.188196	9.930220	10.069780	10.118416	9.881584	35
26	9.811952	10.188048	9.930475	10.069525	10.118523	9.881477	34
27	9.812100	10.187900	9.930731	10.069269	10.118631	9.881369	33
28	9.812248	10.187752	9.930987	10.069013	10.118739	9.881261	32
29	9.812396	10.187604	9.931243	10.068757	10.118847	9.881153	31
30	9.812544	10.187456	9.931499	10.068501	10.118954	9.881046	30
	Co.s. 49° Sine 139°	Secant 49°	Co.t. 49° Tan 139°	Tangent 49°	Co. Sec. 49°	Sine 49°	Min.

49 — Degrees — 139.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
49°	2	12	25	37	49	62	74	86	99	111	123	136
	2	9	18	27	36	45	54	63	72	81	90	99

40 — Degrees — 130.

Min.	Sine 40°	Co. Sec. 40°	Tangent 40°	Co.t. 40° Tan. 130°	Secant 40°	Co.s. 40° Sine 130°	
30	9.812544	10.187456	9.931499	10.068501	10.118954	9.881046	30
31	9.812692	10.187308	9.931755	10.068245	10.119062	9.880938	29
32	9.812840	10.187160	9.932010	10.067990	10.119170	9.880830	28
33	9.812988	10.187012	9.932266	10.067734	10.119278	9.880722	27
34	9.813135	10.186865	9.932522	10.067478	10.119387	9.880613	26
35	9.813283	10.186717	9.932778	10.067222	10.119495	9.880505	25
36	9.813430	10.186570	9.933033	10.066967	10.119603	9.880397	24
37	9.813578	10.186422	9.933289	10.066711	10.119711	9.880289	23
38	9.813725	10.186275	9.933545	10.066455	10.119820	9.880180	22
39	9.813872	10.186128	9.933800	10.066200	10.119928	9.880072	21
40	9.814019	10.185981	9.934056	10.065944	10.120037	9.879963	20
41	9.814166	10.185834	9.934311	10.065689	10.120145	9.879855	19
42	9.814313	10.185687	9.934567	10.065433	10.120254	9.879746	18
43	9.814460	10.185540	9.934823	10.065177	10.120363	9.879637	17
44	9.814607	10.185393	9.935078	10.064922	10.120471	9.879529	16
45	9.814753	10.185247	9.935333	10.064667	10.120580	9.879420	15
46	9.814900	10.185100	9.935589	10.064411	10.120689	9.879311	14
47	9.815046	10.184954	9.935844	10.064156	10.120798	9.879202	13
48	9.815193	10.184807	9.936100	10.063900	10.120907	9.879093	12
49	9.815339	10.184661	9.936355	10.063645	10.121016	9.878984	11
50	9.815485	10.184515	9.936610	10.063390	10.121125	9.878875	10
51	9.815632	10.184368	9.936866	10.063134	10.121234	9.878766	9
52	9.815778	10.184222	9.937121	10.062879	10.121344	9.878656	8
53	9.815924	10.184076	9.937376	10.062624	10.121453	9.878547	7
54	9.816069	10.183931	9 937632	10.062368	10.121562	9.878438	6
55	9.816215	10.183785	9.937887	10.062113	10.121672	9.878328	5
56	9.816361	10.183639	9.938142	10.061858	10.121781	9.878219	4
57	9.816507	10.183493	9.938398	10.061602	10.122891	9.878109	3
58	9.816652	10.183348	9.938653	10.061347	10.122001	9.877999	2
59	9.816798	10.183202	9 938908	10.061092	10.122110	9.877890	1
60	9.816943	10.183057	9.939163	10.060837	10.122220	9.877780	0
	Co.s. 49° Sine 139°	Secant 49°	Co.t. 49° Tan. 139°	Tangent 49°	Co. Sec. 49°	Sine 49°	Min.

49 — Degrees — 139.

40°

49° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	43	64	85	106	128	149	170	192	213	234

A Table of Artificial Sines,

41 — Degrees — 131.

Min.	Sine 41°	Co. Sec. 41°	Tangent 41°	Co.t. 41° Tan. 131°	Secant 41°	Co.s. 41° Sine 131°	
0	9.816943	10.183057	9.939163	10.060837	10.122220	9.877780	60
1	9.817088	10.182912	9.939418	10.060582	10.122330	9.877670	59
2	9.817233	10.182767	9.939673	10.060327	10.122440	9.877560	58
3	9.817379	10.182621	9.939929	10.060071	10.122550	9.877450	57
4	9.817524	10.182476	9.940183	10.059817	10.122660	9.877340	56
5	9.817668	10.182332	9.940438	10.059562	10.122770	9.877230	55
6	9.817813	10.182187	9.940694	10.059306	10.122880	9.877120	54
7	9.817958	10.182042	9.940949	10.059051	10.122990	9.877010	53
8	9.818103	10.181897	9.941204	10.058796	10.123101	9.876899	52
9	9.818247	10.181753	9.941458	10.058542	10.123211	9.876789	51
10	9.818392	10.181608	9.941714	10.058286	10.123322	9.876678	50
11	9.818536	10.181464	9.941968	10.058032	10.123432	9.876568	49
12	9.818681	10.181319	9.942223	10.057777	10.123543	9.876457	48
13	9.818825	10.181175	9.942478	10.057522	10.123653	9.876347	47
14	9.818969	10.181031	9.942733	10.057267	10.123764	9.876236	46
15	9.819113	10.180887	9.942988	10.057012	10.123875	9.876125	45
16	9.819257	10.180743	9.943243	10.056757	10.123986	9.876014	44
17	9.819401	10.180599	9.943498	10.056502	10.124096	9.875904	43
18	9.819545	10.180455	9.943752	10.056248	10.124207	9.875793	42
19	9.819689	10.180311	9.944007	10.055993	10.124318	9.875682	41
20	9.819832	10.180168	9.944262	10.055738	10.124429	9.875571	40
21	9.819976	10.180024	9.944517	10.055483	10.124541	9.875459	39
22	9.820120	10.179880	9.944771	10.055229	10.124652	9.875348	38
23	9.820263	10.179737	9.945026	10.054974	10.124763	9.875237	37
24	9.820406	10.179594	9.945281	10.054719	10.124874	9.875126	36
25	9.820550	10.179450	9.945535	10.054465	10.124986	9.875014	35
26	9.820693	10.179307	9.945790	10.054210	10.125097	9.874903	34
27	9.820836	10.179164	9.946045	10.053955	10.125209	9.874791	33
28	9.820979	10.179021	9.946299	10.053701	10.125320	9.874680	32
29	9.821122	10.178878	9.946554	10.053446	10.125431	9.874568	31
30	9.821265	10.178735	9.946808	10.053192	10.125544	9.874456	30
	Co.s. 48° Sine 138°	Secant 48°	Co.t. 48° Tan. 138°	Tangent 48°	Co. Sec. 48°	Sine 48°	Min.

48 — Degrees — 138.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	2	12	24	36	48	59	71	83	95	107	119	130
41°	2	9	19	27	37	46	56	65	74	84	93	102

41 — Degrees — 131.

Min.	Sine 41°	Co. Sec. 41°	Tangent 41°.	Co.t. 41° Tan. 131°	Secant 41°	Co.s. 41° Sine 131°	
30	9.821265	10.178735	9.946808	10.053192	10.125544	9.874456	30
31	9.821407	10.178593	9.947063	10.052937	10.125656	9.874344	29
32	9.821550	10.178450	9.947318	10.052682	10.125768	9.874232	28
33	9.821693	10.178307	9.947572	10.052428	10.125879	9.874121	27
34	9.821835	10.178165	9.947826	10.052174	10.125991	9.874009	26
35	9.821977	10.178023	9.948081	10.051919	10.126104	9.873896	25
36	9.822120	10.177880	9.948336	10.051664	10.126216	9.873784	24
37	9.822262	10.177738	9.948590	10.051410	10.126328	9.873672	23
38	9.822404	10.177596	9.948844	10.051156	10.126440	9.873560	22
39	9.822546	10.177454	9.949099	10.050901	10.126552	9.873448	21
40	9.822688	10.177312	9.949353	10.050647	10.126665	9.873335	20
41	9.822830	10.177170	9.949607	10.050393	10.126777	9.873223	19
42	9.822972	10.177028	9.949862	10.050138	10.126890	9.873110	18
43	9.823114	10.176886	9.950116	10.049884	10.127002	9.872998	17
44	9.823255	10.176745	9.950370	10.049630	10.127115	9.872885	16
45	9.823397	10.176603	9.950625	10.049375	10.127228	9.872772	15
46	9.823539	10.176461	9.950879	10.049121	10.127341	9.872659	14
47	9.823680	10.176320	9.951133	10.048867	10.127453	9.872547	13
48	9.823821	10.176179	9.951388	10.048612	10.127566	9.872434	12
49	9.823963	10.176037	9.951642	10.048358	10.127679	9.872321	11
50	9.824104	10.175896	9.951896	10.048104	10.127792	9.872208	10
51	9.824245	10.175755	9.952150	10.047850	10.127905	9.872095	9
52	9.824386	10.175614	9.952405	10.047595	10.128019	9.871981	8
53	9.824527	10.175473	9.952659	10.047341	10.128132	9.871868	7
54	9.824668	10.175332	9.952913	10.047087	10.128245	9.871755	6
55	9.824808	10.175192	9.953167	10.046833	10.128359	9.871641	5
56	9.824949	10.175051	9.953421	10.046579	10.128472	9.871528	4
57	9.825090	10.174910	9.953675	10.046325	10.128586	9.871414	3
58	9.825230	10.174770	9.953929	10.046071	10.128699	9.871301	2
59	9.825371	10.174629	9.954183	10.045817	10.128813	9.871187	1
60	9.825511	10.174489	9.954437	10.045563	10.128927	9.871073	0
	Co.s, 48° Sine 138°	Secant 48°	Co.t. 48° Tan 138°	Tangent 48°	Co. Sec. 48°	Sine 48°	Min.

41°

48 — Degrees — 138.

48° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	42	64	85	106	127	149	170	191	212	234

A Table of Artificial Sines,

42 — Degrees — 132.

Min.	Sine 42°	Co. Sec. 42°	Tangent 42°	Co.t. 42° Tan. 132°	Secant 42°	Co.s. 42° Sine 132°	
0	9.825511	10.174489	9.954437	10.045563	10.128927	9.871073	60
1	9.825651	10.174349	9.954691	10.045309	10.129040	9.870960	59
2	9.825791	10.174209	9.954945	10 045055	10.129154	9.870846	58
3	9.825931	10.17406,	9.955200	10.044800	10.129268	9.870732	57
4	9.826071	10.173929	9.955454	10.044546	10.129382	9.870618	56
5	9.826211	10.173789	9.955707	10.044293	10.129496	9.870504	55
6	9.826351	10.173649	9.955961	10.044039	10.129610	9.870390	54
7	9.826491	10.173509	9.956215	10.043785	10.129724	9.870276	53
8	9.826631	10.173369	9.956469	10.043531	10.129839	9.870161	52
9	9.826770	10.173230	9.956723	10.043277	10.129953	9.870047	51
10	9.826910	10.173090	9.956977	10.043023	10.130067	9.869933	50
11	9.827049	10.172951	9.957231	10.042769	10.130182	9.869818	49
12	9.827189	10.172811	9.957485	10.042515	10.130296	9.869704	48
13	9.827328	10.172672	9.957739	10.042261	10.130411	9.869589	47
14	9.827467	10.17253	9.957993	10.042007	10.130526	9.869474	46
15	9.827606	10.172394	9.958246	10.041754	10.130640	9.869360	45
16	9.827745	10.172255	9.958500	10.041500	10.130755	9.869245	44
17	9.827884	10.172116	9.958754	10.041246	10.130870	9.869130	43
18	9.828023	10.171977	9.959008	10.040992	10.130985	9.869015	42
19	9.828162	10.171838	9.959262	10.040738	10.131100	9.868900	41
20	9.828301	10.171699	9.959516	10.040484	10.131215	9.868785	40
21	9.828439	10.171561	9.959769	10.040231	10.131330	9.868670	39
22	9.828578	10.171422	9.960023	10.039977	10.131445	9.868555	38
23	9.828716	10.171284	9.960277	10.039723	10.131560	9.868440	37
24	9.828855	10.171145	9.960531	10.039469	10.131676	9.868324	36
25	9.828993	10.171007	9.960784	10.039216	10.131791	9.868209	35
26	9.829131	10.170869	9.961038	10.038962	10.131907	9.868093	34
27	9.829269	10.170731	9.961291	10.038709	10.132022	9.867978	33
28	9.829407	10.170593	9.961545	10.038455	10.132138	9.867862	32
29	9.829545	10.170455	9.961799	10.038201	10.132253	9.867747	31
30	9.829683	10.170317	9.962052	10.037948	10.132369	9.867631	30
	Co.s. 47° Sine 137°	Secant 47°	Co.t. 47° Tan 137°	Tangent 47°	Co. Sec. 47°	Sine 47°	Min.

47 — Degrees — 137.

40'. Sine	1"	5"	10"	15"	20"	25"	30"	35"	40"	45"	50"	55"
	2	11	23	34	46	57	69	80	92	103	115	126
47°	2	10	19	29	39	48	58	68	77	87	96	106

42 — Degrees — 132.

Min.	Sine 42°	Co. Sec. 42°	Tangent 42°	Co.t. 42° Tan. 132°	Secant 42°	Co.s. 42° Sine 132°	
30	9.829683	10.170317	9.962052	10.037948	10.132369	9.867631	30
31	9.829821	10.170179	9.962306	10.037694	10.132485	9.867515	29
32	9.829959	10.170041	9.962560	10.037440	10.132601	9.867399	28
33	9.830097	10.169903	9.962813	10.037187	10.132717	9.867283	27
34	9.830234	10.169766	9.963067	10.036933	10.132833	9.867167	26
35	9.830372	10.169628	9.963320	10.036680	10.132949	9.867051	25
36	9.830509	10.169491	9.963574	10.036426	10.133065	9.866935	24
37	9.830646	10.169354	9.963827	10.036173	10.133181	9.866819	23
38	9.830784	10.169216	9.964081	10.035919	10.133297	9.866703	22
39	9.830921	10.169079	9.964335	10.035665	10.133414	9.866586	21
40	9.831058	10.168942	9.964588	10.035412	10.133530	9.866470	20
41	9.831195	10.168805	9.964842	10.035158	10.133647	9.866353	19
42	9.831332	10.168668	9.965095	10.034905	10.133763	9.866237	18
43	9.831469	10.168531	9.965349	10.034651	10.133880	9.866120	17
44	9.831606	10.168394	9.965602	10.034398	10.133996	9.866004	16
45	9.831742	10.168258	9.965855	10.034145	10.134113	9.865887	15
46	9.831879	10.168121	9.966109	10.033891	10.134230	9.865770	14
47	9.832015	10.167985	9.966362	10.033638	10.134347	9.865653	13
48	9.832152	10.167848	9.966616	10.033384	10.134464	9.865536	12
49	9.832288	10.167712	9.966869	10.033131	10.134581	9.865419	11
50	9.832425	10 167575	9.967123	10.032877	10.134698	9.865302	10
51	9.832561	10 167439	9.967376	10.032624	10.134815	9.865185	9
52	9.832697	10.167303	9.967629	10.032371	10.134932	9.865068	8
53	9.832833	10.167167	9 967883	10.032117	10.135050	9.864950	7
54	9.832969	10.167031	9.968136	10.031864	10.135167	9.864833	6
55	9.833105	10.166895	9.968389	10.031611	10.135284	9.864716	5
56	9.833241	10.166759	9.968643	10.031357	10.135402	9.864598	4
57	9.833377	10.166623	9.968896	10.031104	10.135519	9.864481	3
58	9.833512	10.166488	9.969149	10.030851	10.135637	9.864363	2
59	9.833648	10.166352	9.969403	10.030597	10.135755	9.864245	1
60	9.833783	10.166217	9.969656	10.030344	10.135873	9.864127	0
	Co.s.47° Sine 137°	Secant 47°	Co.t. 47° Tan. 137°	Tangent 47°	Co. sec. 47°	Sine 47°	Min.

47 — Degrees — 137

42°

47° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	42	63	84	105	127	148	169	190	211	232

A Table of Artificial Sines,

43 — Degrees — 133.

Min.	Sine 43°	Co. Sec. 43°	Tangent 43°	Co.t 43° Tan. 133°	Secant 43°	Co.s. 43° Sine 133°	
0	9.833783	10.166217	9.969656	10.030344	10.135873	9.864127	60
1	9.833919	10.166081	9.969909	10.030091	10.135990	9.864010	59
2	9.834054	10.165946	9.970162	10 029838	10.136108	9.863892	58
3	9.834189	10.165811	9.970416	10.029584	10.136226	9.863774	57
4	9.834325	10.165675	9.970669	10.029331	10.136344	9.863656	56
5	9.834460	10.165540	9.970922	10.029078	10.136462	9.863538	55
6	9.834595	10.165405	9.971175	10.028825	10.136581	9.863419	54
7	9.834730	10.165270	9 971429	10.028571	10.136699	9.863301	53
8	9.834865	10.165135	9.971682	10.028318	10.136817	9.863183	52
9	9.834999	10.165001	9.971935	10.028065	10.136936	9.863064	51
10	9.835134	10.164866	9.972188	10.027812	10.137054	9.862946	50
11	9.835269	10.164731	9.972441	10.027559	10.137173	9.862827	49
12	9.835403	10.164597	9.972694	10.027306	10.137291	9.862709	48
13	9.835538	10.164462	9.972948	10.027052	10.137410	9.862590	47
14	9.835672	10.164328	9.973201	10.026799	10.137529	9.862471	46
15	9.835807	10.164193	9.973454	10.026546	10.137647	9.862353	45
16	9.835941	10.164059	9.973707	10.026293	10.137766	9.862234	44
17	9.836075	10.163925	9.973960	10.026040	10.137885	9.862115	43
18	9.836209	10.163791	9.974213	10.025787	10.138004	9.861996	42
19	9.836343	10.163657	9.974466	10.025534	10.138123	9.861877	41
20	9.836477	10.163523	9.974719	10.025281	10.138242	9.861758	40
21	9.836611	10.163389	9.974973	10.025027	10.138362	9.861638	39
22	9.836745	10.163255	9.975226	10.024774	10.138481	9.861519	38
23	9.836878	10.163122	9.975479	10.024521	10.138600	9.861400	37
24	9.837012	10.162988	9.975732	10.024268	10.138720	9.861280	36
25	9.837146	10.162854	9.975985	10.024015	10.138839	9.861161	35
26	9.837279	10.162721	9.976238	10.023762	10.138959	9.861041	34
27	9.837412	10.162588	9.976491	10.023505	10.139078	9.860922	33
28	9.837546	10.162454	9.976744	10.023256	10.139198	9.860802	32
29	9.837679	10.162321	9.976997	10.023003	10.139318	9.860682	31
30	9.837812	10.162188	9.977250	10.022750	10.139438	9.860562	30
	Co.s 46° Sine 136°	Secant 46°	Co.t. 46° Tan. 136°	Tangent 46°	Co. sec. 46°	Sine 46°	Min.

43° 46 — Degrees — 136.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55′
46°	2	11	22	33	44	55	67	78	89	100	111	122
	2	10	20	30	40	50	60	70	80	90	100	110

43 — Degrees — 133.

Min.	Sine 43°	Co. Sec. 43°	Tangent 43°	Co.t.43° Tan.133°	Secant 43°	Co.s. 43° Sine 133°	
30	9.837812	10.162188	9.977250	10.022750	10.139438	9.860562	30
31	9.837945	10.162055	9.977503	10.022497	10.139558	9.860442	29
32	9.838078	10.161922	9.977756	10.022244	10.139678	9.860322	28
33	9.838211	10.161789	9.978009	10.021991	10.139798	9.860202	27
34	9.838344	10.161656	9.978262	10.021738	10.139918	9.860082	26
35	9.838477	10.161523	9.978515	10.021485	10.140038	9.859962	25
36	9.838610	10.161390	9.978768	10.021232	10.140158	9.859842	24
37	9.838742	10.161258	9.979021	10.020979	10.140279	9.859721	23
38	9.838875	10.161125	9.979274	10.020726	10.140399	9.859601	22
39	9.839007	10.160993	9.979527	10.020473	10.140520	9.859480	21
40	9.839140	10.160860	9.979780	10.020220	10.140640	9.859360	20
41	9.839272	10.160728	9.980033	10.019967	10.140761	9.859239	19
42	9.839404	10.160596	9.980286	10.019714	10.140881	9.859119	18
43	9.839536	10.160464	9.980538	10.019462	10.141002	9.858998	17
44	9.839668	10.160332	9.980791	10.019209	10.141123	9.858877	16
45	9.839800	10.160200	9.981044	10.018956	10.141244	9.858756	15
46	9.839932	10.160068	9.981297	10.018703	10.141365	9.858635	14
47	9.840064	10.159936	9.981550	10.018450	10.141486	9.858514	13
48	9.840196	10.159804	9.981803	10.018197	10.141607	9.858393	12
49	9.840328	10.159672	9.982056	10.017944	10.141728	9.858272	11
50	9.840459	10.159541	9.982309	10.017691	10.141849	9.858151	10
51	9.840591	10.159409	9.982562	10.017438	10.141971	9.858029	9
52	9.840722	10.159278	9.982814	10.017186	10.142092	9.857908	8
53	9.840854	10.159146	9.983067	10.016933	10.142214	9.857786	7
54	9.840985	10.159015	9.983320	10.016680	10.142335	9.857665	6
55	9.841116	10.158884	9.983573	10.016427	10.142457	9.857543	5
56	9.841247	10.158753	9.983826	10.016174	10.142578	9.857422	4
57	9.841378	10.158622	9.984079	10.015921	10.142700	9.857300	3
58	9.841509	10.158491	9.984331	10.015669	10.142822	9.857178	2
59	9.841640	10.158360	9.984584	10.015416	10.142944	9.857056	1
60	9.841771	10.158229	9.984837	10.015163	10.143066	9.856934	0
	Co.s. 46° Sine 136°	Secant 46°	Co.t. 46° Tan 136°	Tangent 46°	Co. Sec. 46°	Sine 46°	Min.

43°

46 — Degrees — 136.

46° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	42	63	84	105	127	148	169	190	211	232

A Table of Artificial Sines,

44 — Degrees — 134.

Min.	Sine 44°	Co. Sec. 44°	Tangent 44°	Co.t 44° Tan. 134°	Secant 44°	Co.s. 44° Sine 134°	
0	9 841771	10.158228	9.984837	10.015163	10.143066	9.856934	60
1	9.841902	10.158018	9.985090	10.014910	10.143188	9.856812	59
2	9.842033	10.157967	9.985343	10 014657	10.143310	9.856690	58
3	9.842163	10.157837	9.985596	10.014404	10.153432	9.856568	57
4	9.842294	10.157706	9.985848	10.014152	10.143554	9.856446	56
5	9.842424	10.157576	9.986101	10.013899	10.143677	9.856323	55
6	9.842555	10.157445	9.986354	10.013646	10.143799	9.856201	54
7	9.842685	10.157315	9 986607	10.013393	10.143922	9.856078	53
8	9.842815	10.157185	9.986860	10.013140	10.144044	9.855956	52
9	9.842946	10.157054	9.987112	10.012888	10.144167	9.855833	51
10	9.843076	10.156924	9.987365	10.012635	10.144289	9.855711	50
11	9.843206	10.156794	9.987618	10.012382	10.144412	9.855588	49
12	9.843336	10.156664	9.987871	10.012129	10.144535	9.855465	48
13	9.843466	10.156534	9.988123	10.011877	10.144658	9.855342	47
14	9.843595	10.156405	9.988376	10.011624	10.144781	9.855219	46
15	9.843725	10.156275	9.988629	10.011371	10.144904	9.855096	45
16	9.843855	10.156145	9.988882	10.011118	10.145027	9.854973	44
17	9.843984	10.156016	9.989134	10.010866	10.145150	9.854850	43
18	9.844114	10.155886	9.989387	10.010613	10.145273	9.854727	42
19	9.844243	10.155757	9.989640	10.010360	10.145397	9.854603	41
20	9.844372	10.155628	9.999893	10.010107	10.145520	9.854480	40
21	9.844502	10.155498	9.990145	10.009855	10.145644	9.854356	39
22	9.844631	10.155369	9.990398	10.009602	10.145767	9.854233	38
23	9.844760	10.155240	9.990651	10.009349	10.145891	9.854109	37
24	9.844889	10.155111	9.990903	10.009097	10.146014	9.853986	36
25	9.845018	10.154982	9.991156	10.008844	10.146138	9.853862	35
26	9.845147	10.154853	9.991409	10.008591	10.146262	9.853738	34
27	9.845276	10.154724	9.991662	10.008338	10.146386	9.853614	33
28	9.845405	10.154595	9.991914	10.008086	10.146510	9.853490	32
29	9.845533	10.154467	9.992167	10.007833	10.146634	9.853366	31
30	9.845662	10.154338	9.992420	10.007580	10.146758	9.853242	30
	Co.s 45° Sine 135°	Secant 45°	Co.t. 45° Tan. 135°	Tangent 45°	Co. sec. 45°	Sine 45°	Min.

45° — Degrees — 135.

Sine	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55′
	2	10	21	32	43	53	64	75	86	96	107	118
45°	2	10	21	31	41	52	62	72	82	93	103	114

44 — Degrees — 134.

Min.	Sine 44°	Co. Sec. 44°	Tangent 44°	Co.t. 44° Tan. 134°	Secant 44°	Co.s. 44° Sine 134°	
30	9.845662	10.154339	9.992420	10.007580	10.146758	9.853242	30
31	9.845790	10.154210	9.992672	10.007328	10.146882	9.853118	29
32	9.845919	10.154081	9.992925	10.007075	10.147006	9.852994	28
33	9.846047	10.153953	9.993178	10.006822	10.147131	9.852869	27
34	9.846175	10.153825	9.993430	10.006570	10.147255	9.852745	26
35	9.846304	10.153696	9.993683	10.006317	10.147380	9.852620	25
36	9.846432	10.153568	9.993936	10.006064	10.147504	9.852496	24
37	9.846560	10.153440	9.994189	10.005811	10.147629	9.852371	23
38	9.846688	10.153312	9.994441	10.005559	10.147753	9.852247	22
39	9.846816	10.153184	9.994694	10.005306	10.147878	9.852122	21
40	9.846944	10.153056	9.994947	10.005053	10.148003	9.851997	20
41	9.847071	10.152929	9.995199	10.004801	10.148128	9.851872	19
42	9.847199	10.152801	9.995452	10.004548	10.148253	9.851747	18
43	9.847327	10.152673	9.995705	10.004295	10.148378	9.851622	17
44	9.847454	10.152546	9.995957	10.004043	10.148503	9.851497	16
45	9.847582	10.152418	9.996210	10.003790	10.148628	9.851372	15
46	9.847709	10.152291	9.996463	10.003537	10.148754	9.351246	14
47	9.847836	10.152164	9.996715	10.003285	10.148879	9.851121	13
48	9.847964	10.152036	9.996968	10.003032	10.149004	9.850996	12
49	9.848091	10.151909	9.997221	10.002779	10.149130	9.850870	11
50	9.848218	10 151782	9.997473	10.002527	10.149255	9.850745	10
51	9.848345	10 151655	9.997726	10.002274	10.149381	9.850619	9
52	9.848472	10.151528	9.997979	10.002021	10.149507	9.850493	8
53	9.848599	10.151401	9 998231	10.001769	10.149632	9.850368	7
54	9.848726	10.151274	9.998484	10.001516	10.149758	9.850242	6
55	9.848852	10.151148	9.998737	10.001263	10.149884	9.850116	5
56	9.848979	10.151021	9.998989	10.001011	10.150010	9.849990	4
57	9.849106	10.150894	9.999242	10.000758	10.150136	9.849864	3
58	9.849232	10.150768	9.999495	10.000505	10.150262	9.849738	2
59	9.849359	10.150641	9.999747	10.000253	10.150389	9.849611	1
60	9.849485	10.150515	10.000000	10.000000	10.150515	9.849485	0
	Co.s.45° Sine135°	Secant 45°	Co.t. 45° Tan.135°	Tangent 45°	Co. sec. 45°	Sine 45°	Min.

45 — Degrees — 135

57° Tan.	1″	5″	10″	15″	20″	25″	30″	35″	40″	45″	50″	55″
	4	21	42	63	84	105	127	148	169	190	211	232

A Table of Angles, which every Rumb (or Point of the Compaſs) maketh with the Meridian)

North	South	Point	D.	M.	North	South
		¼	2	49		
		½	5	37		
		¾	8	26		
N by E	S by E	1	11	15	N by W	S by W
		1 ¼	14	4		
		1 ½	16	52		
		1 ¾	19	41		
N N E	S S E	2	22	30	N N W	S S W
		2 ¼	25	19		
		2 ½	28	7		
		2 ¾	30	56		
NE by N	S E by S	3	33	45	NW by N	SW by S
		3 ¼	36	34		
		3 ½	39	23		
		3 ¾	42	11		
N. Eaſt	S. Eaſt	4	45	0	N. Weſt	S. Weſt
		4 ¼	47	49		
		4 ½	50	37		
		4 ¾	53	26		
NE. by E.	SE by E	5	56	15	NW by W	SW by W
		5 ¼	59	4		
		5 ½	61	52		
		5 ¾	64	41		
E.N.E.	E S E	6	67	30	W N W	W S W
		6 ¼	70	19		
		6 ½	73	7		
		6 ¾	75	56		
E. by N.	E by S	7	78	45	W. by N.	W by S
		7 ¼	81	34		
		7 ½	84	22		
		7 ¾	87	11		
Eaſt	Eaſt	8	90	0	Weſt	Weſt

The Logarithmic Sines, Tangents, and Secants to every Point and Quarter Point of the Compass.

Points	Sines.	Co-secants	Tangents	Co-tangents	Secants	Co-sines	
0	0.00000	Infinite	0.00000	Infinite	10.00000	10.00000	8
0¼	8 69080	11.30920	8.69132	11.30868	10.00052	9.99948	7¾
0½	8.99130	11.00870	8.99340	11.00660	10.00210	9.99790	7½
0¾	9.16652	10.83348	9.17125	10.82875	10.00473	9.99527	7¼
1	9.29024	10.70976	9.29866	10.70134	10.0084 3	9.99157	7
1¼	9.38557	10.61443	9.39879	10.60121	10.01321	9.98679	6¾
1½	9.46282	10.53718	9.48194	10.51806	10.01912	9.98088	6½
1¾	9.52749	10.47251	9.55365	10.44635	10.02616	9.97384	6¼
2	9.58284	10.41716	9.61722	10.38278	10.03438	) .9656.	6
2¼	9.63099	10.36901	9.67483	10.32517	10.04384	9.95616	5¾
2½	9.67339	10.32661	9.72796	10.27204	10 05456	9.94543	5½
2¾	9.71105	10.28895	9.77770	10.22230	10.06665	9.93335	5¼
3	9.74474	10 25526	9.82489	10.17511	10.08015	9.9198;	5
3¼	9.77503	10.22497	9.87020	10.12980	10.09517	9.9048;	4¾
3½	9.80236	10.19764	9.91417	10.08583	10.11181	9.88819	4½
3¾	9.82708	10.17292	9.95729	10.04271	10.13021	9.86979	4¼
4	9.84948	10.15052	10.00000	10.00000	10.15052	9.84948	4
	Co-sines	Secants	Co-tangents	Tangents	Co-secants	Sines	Points

This Table is calculated to the neareſt Second, for every Quarter Point of the Compaſs; and is beſt for Practice in Plane and Mercator's Sailing, although not uſed in elucidating thoſe Parts of Navigation, that the Learner may accuſtom himſelf to take the Logarithmic Sines, Tangents, &c. from the preceding Tables, as a Preparation for his aſtronomical Studies.

TISH
11 SP 89

Avoirdupoise		Troy		Apothecaries	
1 lb.	16 Ounces	1 lb	12 Ounces	1 lb	
1 Ounce	16 Drams	1 oz	20 penny weights	1 oz	
1 Dram	$27\frac{11}{32}$ Grains	1 dwt	24 Grains	1 dram	
				1 Scruple	

Equalization of the above Weights

Avoirdupoise			Troy		Apothecaries
1 lb is equal to	7000 Grains	or	14 oz. 11 dwt. 16 Grains	or	14 lb. 4 oz. 2 dr.
1 Ounce "	$437\frac{1}{2}$ "	"	— " 18 " $5\frac{1}{2}$ "	"	— " 7 " — "
1 Dram "	$27\frac{11}{32}$ "	"	— " 1 " $3\frac{11}{32}$ "	"	— " — " 1 "

Troy			Apothecaries		Avoirdupoise
1 lb is equal to	5760 Grains	or	1 lb — — —	or	— " 13 oz. 4 $\frac{\text{drs}}{700}$ drams
1 Ounce "	480 "	"	— " 1 ounce —	"	— " 1 " 1 $\frac{\text{drs}}{700}$ "
1 penny Weight "	24 "	"	— " — " 1 Scrup 4 Grains	"	— " — " — " $\frac{24}{27\frac{11}{32}}$

Apothecaries			Avoirdupoise		Troy
1 lb is equal to	5760 Grains	or	— " 13 oz. 2 $\frac{\text{drs}}{700}$ drams	or	1 lb
1 " " "	480 "	"	— " 1 " 1 $\frac{\text{drs}}{700}$ "	"	—

BRITISH
11 SEP 85
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